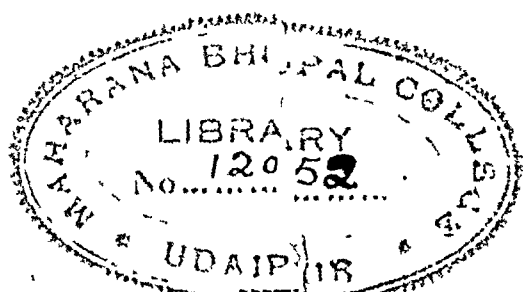


MODERN ECONOMIC THEORY



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Publisher's Note.

On account of the partition of the country Dr. Akhtar's rights have been purchased by the publishers and the book will now be revised by Prof. Kewal Krishan Dewett and appear under his name.

PREFACE TO THE SECOND EDITION

The first edition had a very encouraging response. In the second edition the book has been thoroughly revised so as to make it more simple and lucid. Additions have been made in almost every chapter so that the book has been made comprehensive enough to cover the course completely.

In order to introduce the students to advanced works on the subject select references have been given at the end of each chapter and at the end of the book important questions arranged topic-wise have been appended. The second edition is being placed in the market with much greater confidence and it is hoped that it will meet the requirements of the teachers and students much better.

I must thank my pupil and friend L. Dalip Chand Aggarwal, M.A. who has helped me a lot in the preparation of this edition.

Kewal Krishan Dewett.

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CHAPTER I

THE NATURE AND SCOPE OF ECONOMICS

1. **The Problem of Definition.** Dr. J. N. Keynes is not far wrong when he remarks that "Political Economy is said to have strangled itself with definitions." Every economist signalled his *debut* in the world of Economics by coining a new definition, making the confusion worse confounded. There are, therefore, economists like Richard Jones and Comte who would do away with the definition altogether, it being pedantic and useless. But the task of defining a subject is not to be regarded as mere pedantry. It is very essential for a student to have some definition in mind as a working basis. Besides, the discussion leading to a definition is very useful in giving clarity to the fundamental concept of the subject. We shall not, therefore, dispense with the definition and the discussion connected with it.

Economics is considered one of the youngest sciences and, some would think it is still in its infancy. Till it reaches maturity, ideas connected with it cannot be supposed to have settled down. There are many an economic matter round which controversy still rages furiously. The problem of the definition of Economics is one such matter. Let us examine some of the definitions put forward from time to time.

2. **Is Economics a Science of Wealth?** According to Adam Smith Economics was concerned with "an enquiry into the nature and causes of Wealth of Nations." The father of Political Economy, as he was called, was followed by his "sons" who took up the echo, and gave Economics the name of science of wealth. At a time when religious sentiment was strong and spiritual values held sway over men's minds, the idea of wealth and the pampered and degenerating ways of the rich could only excite repulsion in the enlightened mind. It called forth righteous indignation from men of letters like Carlyle and Ruskin. The early economists, the votaries of the new cult of Mammon-worship, were looked down upon. Unabashed pursuit of wealth was not something which could find favour with any class of people. Economics was considered to teach selfishness and came to be called a 'dismal science.'

Luckily Economics has now been extricated from this unenviable position. Exaggerated emphasis on wealth is gone. No undue importance is now attached to wealth as such and for its own sake. It is now fully recognised that wealth is only a means to an end.

The end is human welfare. Wealth is produced, acquired and accumulated not because it has a virtue of its own, but because it enables man to promote his well-being. The story of King Medas is well known. He was much fond of gold but was he satisfied when everything that he touched turned into gold? Rather, he was very unhappy. Wealth cannot be the be-all and the end-all of human endeavour nor can it be expected to be the sole cause contributing to human happiness. Economists have outlived the fallacy of regarding wealth as of primary importance. *The emphasis has now shifted from wealth to man.* It is for man's benefit that wealth exists. Man is primary and wealth occupies only a secondary place. As Marshall rightly puts it *Economics is "on one side a study of wealth; and on the other, and more important side, a part of the study of man."* Economics thus is not a science of wealth but a science of man primarily. *It is a science of human activities concerning wealth.* It may be called the science of human welfare.

3. The Traditional View. The traditional view is that Economics is concerned with those human activities which centre round wealth not for its own sake but for the sake of human welfare that it promotes. The following definitions which have become current coin in economic literature represent this traditional view.

Economics is a "science which treats of those social phenomena that are due to the wealth-getting and wealth-using activities of man." (Ely).

"Economics is the study of the general methods by which men co-operate to meet their material needs." (Beveridge).

"The aim of political Economy is the explanation of the general causes on which the material welfare of human beings depends" (Cannan).

"The range of our inquiry becomes restricted to that part of social welfare that can be brought directly or indirectly into relation with the measuring rod of money." (Pigou).

"Political Economy or Economics is a study of mankind in the ordinary business of life; it examines that part of individual and social action which is most closely connected with the attainment and with the use of the material requisites of well-being."

(Marshall).

Marshall seems to have settled the matter of the definition of Economics and large consensus of expert opinion had been mobilised behind him. For a long time the view had been accepted that 'Economics deals with man's actions in relation to wealth.' Marshall's idea of 'ordinary business of life' means how a man gets wealth and how he uses it to satisfy his manifold wants. This idea when amplified will comprehend all the four departments of Economics, viz, Consumption, Production, Exchange and Distribution. These are all 'the actions of man in relation to wealth.' Economics studies how man consumes wealth, how he produces it, how wealth is exchanged and distributed in the community.

4. **Economics as a Science of Material Welfare.** What Marshall seemed to have settled once for all has been again unsettled and the ball of controversy has been set rolling once again by Robbins' attack on the traditional view of Economics.

One thread seems to run through the well-known definitions given in the preceding section, viz., that of material welfare. Beveridge speaks of meeting material needs, Cannan of "Causes of Material welfare" and Marshall of "material requisites of well-being". According to these economists the aim of Economics is to study those human activities which are conducive to human welfare in its material aspect.

Why have the economists concerned themselves with material welfare? Human welfare in all its aspects is simply immeasurable. It is so vague, so complex and so volatile. It would be futile to measure it. Human ingenuity has failed to devise an effective instrument for assessing welfare in all its manifestations. But economists have with them an instrument by means of which material aspects of human welfare can be measured. This instrument is wealth. It is a convenient and tangible measure of human motives. Wealth furnishes man with material means of satisfying his wants and of promoting his welfare. By means of wealth a man can help himself and help others. Wealth brings him food, clothing and shelter and satisfies also his more refined wants and desires. No wonder that human beings are accustomed to measuring their welfare by the amount of wealth they own. Economists, in so far as they study wealth, can be legitimately regarded as studying causes of material welfare.

But Lionel Robbins has led a frontal attack on this position. He does not think it right for the economists to confine their attention to the study of material welfare. In his book 'Nature and Significance of Economic Science' he has given numerous examples of goods which are highly conducive to human welfare but which have nothing material in them. There is for example the love of a mother. Who can doubt its place in human welfare? But it finds no place among economic goods. Then, there are services of doctors, lawyers, etc. These services have economic significance. They are scarce and have value in the economic sense but they, too, lack material attributes. Economics is thus concerned both with material as well as non-material things. Those economists, therefore, who confine attention to causes of material welfare expose themselves to the charge that they are one-sided.

Robbins' objection is, however, not merely to the word 'material'. He would not have Economics to do anything with welfare at all. The word welfare too should go. He points out the anomalous position of those who study Economics in terms of welfare. The intoxicants are regarded as wealth. But by no stretch of imagination can they be regarded as conducive to human welfare. There are so many other articles like this the consumption of which is highly detrimental to human well-being. But being scarce they

are subject to the 'pricing process'. They have, in short, economic significance. Human welfare is not served by them. Robbins would say, "why talk of welfare at all? Why not throw away the mask altogether?"

Apart from the anomalies into which the welfare economists fall, there are other reasons for discarding the welfare idea from discussions which are strictly economic. Ideas of welfare vary from age to age, from country to country, and from individual to individual. Welfare, as we have already said, is volatile and is simply immeasurable. Why make the attempt at all? It is too vague and indefinite and does not provide an adequate ground for building up a respectable science.

There is the further objection that in assessing human welfare we shall be called upon to give our verdict as to what we regard as conducive to human welfare and what is not so conducive. We shall be transported to the world of Ethics, whereas Economics should be neutral as regards ends. It is not supposed to be its function to pass moral judgments and say what is good and what is bad.

Thus according to "New Economics" Economics is not to be regarded as a study of the causes of material welfare.

5 Modern view. Lionel Robbins has challenged the traditional view of the nature of Economic Science. We have noticed some of his objections in the above section. The hitherto accepted and well known definitions of Economics do not satisfy him. He calls these definitions classificatory and unscientific. We have already seen that according to these definitions Economics is concerned with the causes of material welfare. But welfare is relative and lacks fixity which is so essential for building up a scientific treatise. Further, the idea of material welfare is based on exploded Physiocratic notions. Even the term wealth has no fixed connotation. The same thing is called wealth under certain circumstances and not wealth under others. Water near a spring is not wealth but in a city it is. Robbins aims at lifting Economics to a higher scientific plane by freeing it from such anomalies.

According to Robbins, "*Economics is the Science which studies human behaviour as a relationship between ends and scarce means which have alternative uses*". On analysis we shall find that this definition lays down the following three fundamental propositions which constitute the basis of the structure of Economic Science:--

- (a) 'Ends' refer to wants. Human beings have wants which are unlimited in number. There is no end to what one may want. One can never possibly be completely satisfied. Multiplicity of wants calls forth a ceaseless effort for their satisfaction and the unending cycle of economic activity moves on. If wants had been limited, they would have been adequately satisfied and further incentive to economic effort would have ceased. As a matter of fact few economic problems would have then faced man.

Only because human wants are unlimited that one is compelled to discriminate between more urgent and less urgent wants and select some for satisfaction and reject others.

- (b) Although wants are unlimited yet the means to satisfy them are strictly limited. No doubt, there are certain free goods which also satisfy human wants, nay which are indispensable. But most of the things that we want are scarce. Had the means been unlimited, no economic problem would have arisen. We would have obtained anything that we liked, in any amount without making any effort or sacrifice. But, as it is, the resources at the disposal of a community are scarce.

The term scarcity is used here in a special sense. It is scarcity in relation to requirements or demand. Scarcity is not to be taken in an absolute sense. A commodity may exist in a small quantity; but if no body has any use for it, we shall not call it scarce in the economic sense. A rare but useless commodity is not scarce. On the other hand, there may be huge stocks of a commodity like wheat or coal in the world. It may be abundant in quantity and yet it will be called scarce because the demand is even larger than the supply. It is the extent of demand for a commodity, and not its quantity alone, which will determine whether a commodity is scarce or not. A *crore-pati* may suffer from scarcity because he may have very high ambitions for which his wealth may be insufficient. A man of a few thousands may be happy and contented for he has cut down his wants.

Thus the means, with which Economics is concerned, are those which are scarce in relation to demand and not necessarily those which are available in small quantities. As the available resources are limited, prudence demands that we should economise them. Our means are not enough to meet all our requirements. We must, therefore, decide not only which wants to satisfy but also the extent to which each want should be satisfied. We shall get greater satisfaction if we satisfy a number of wants in part instead of satisfying a few wants fully.

- (c) The third proposition underlying Robbins' definition is that the scarce means are capable of alternative uses. If a commodity could be put only to one use and to none else, few economic problems would arise in its connection. After it has met that use, it would become a free good and will have no economic significance. Actually, however, the uses to which a commodity can be put are numerous, almost unlimited. Hence the demand in the aggregate for that commodity is almost insatiable. As commodities have alternative uses, each commodity is used for the satisfaction of many wants. No particular want is completely satisfied. Before the satiety level is reached in one case, the commodity is

diverted to some other use. A commodity is distributed among its various uses in such a manner, that it yields the same satisfaction at the margin. We make the best of our limited resources, in this manner.

Robbins has sought to demolish the old structure of Economic Science which dealt with the causes of material welfare. Instead he wants to raise a new structure with two foundation-stones: *multiplicity of wants* and *scarcity of means*. In the absence of these two no economic problem would have arisen. Economic activities in this sense are those when one is trying to obtain a scarce good for the satisfaction of his unlimited wants. Wants being unlimited and the means being limited, one must pick and choose. One cannot satisfy all his wants. Economic action of man lies in his utilisation of scarce means for the satisfaction of multiple ends.

Thus economic problems arise under two circumstances: (i) unlimited wants; and (ii) limited means to satisfy them. When a man's actions centre round these two facts, his activity is called an economic activity. Trying to settle a neighbour's quarrel, seeing a cricket match, going on a pleasure hike, playing tennis, etc., are not economic activities. No economic problem arises in their connection.

But when we arrange our daily programme to make the best use of our time or distribute our property among the various uses or plan out a sensible use of the living accommodation that we may have or when a student spends the monthly allowance he receives from his parents—all these are economic activities. In each case we are trying to make the best use of our limited resources. In short, economic activity is one when we economise our limited resources. We shall be deemed to have made the best use of our resources, when we have obtained therefrom maximum satisfaction. To maximise utility is the goal of all economic activity. This is the end which economic behaviour of man seeks to achieve. From the point of the state, Economics may be defined as the 'study of those principles on which the resources of a community should be so regulated and administered as to secure the communal ends without waste.' (Wicksteed).

6. Criticism of Robbins' View. The traditional view of Economics, viz., a study of the causes of material welfare, was according to Robbins too narrow and fleeting. The word 'material' imposed unnecessary limitation. Commodities and services may promote material welfare under one set of circumstances and not under others. Thus this old conception of Economics lacked universality and scientific precision. But Robbins' definition transcends these narrow boundaries and lays down a maxim which is true of all times and places. As Wicksteed puts it, "its (economic) laws are like the laws of life and are applicable to fields that have no connection whatsoever with business or production of wealth." Consequently, no charge of sordidness or preaching of Mammonism can be levelled against 'new' Economics. It can no longer be called a 'dismal' science. Wher-

ever the ends are many, and the means are scarce, Economics is directly concerned. All ideas of relativity are replaced by those of universality and Economics has been placed at a high scientific pedestal.

But Robbins is not without his critics. The Marshallian spirit is not dead. Economists like Durbin, Fraser, Wootton and Beveridge have put up a strong defence of Marshallian Economics. Wootton urges, "that it is very difficult for economists to divest their discussions completely of all normative significance." Fraser says, "Economics is more than a value theory or equilibrium analysis." Robbins' idea of Economics, though admittedly more scientific, is colourless, impersonal and neutral as regards ends. "Equilibrium is just an equilibrium." It is entirely divorced from human welfare. Economics becomes synonymous with theory of value. Attention is focussed on valuation which is now considered the central problem of Economics. Other aspects of the study of Economics have been relegated to the background. The human touch is entirely missing. It is well to emphasise with Ely that "Economics is something more than a science, a science shot through with the infinite variety of human life, calling not only for systematic thinking but for human sympathy, imagination and in an unusual degree for the saving grace of common sense."¹ Robbins reduces Economics to a mere abstraction and makes the study of it still more complex and difficult. This detracts from its utility for the common man. Utility of Economics lies, in a large measure, in its being a concrete and realistic study.

After all there is not much amiss in the traditional definition of Economics as 'a study of a man's ordinary business of life' or 'a man's actions in relation to wealth'. Wealth stands for scarce means and man's actions in relation to them imply economising of them. Therefore, 'disposal of scarce means which can be put to alternative uses' is implicit in it and what is more important, it keeps man steadily in the forefront. We need not, therefore, dethrone Marshall.

We should, however, remember that 'definition is not a mere question of words but question of things'. So long as the things are clear, the words used are immaterial and the wordy warfare is really unnecessary. There is a substantial measure of agreement as to what Economics stands for. The 'centre' is admitted, the dispute only relates to the 'circumference'. This need not be unwelcome because 'without disagreements at the circumference no science can hope to make advances'.

7. Is Human Behaviour Regulated with the Object of Maximising Utility or Does Maximum Utility Merely Follows as a Consequence? This question has been discussed by Mr. J.K. Mehta in his *Advanced Economic Theory*, (1948, p.5). The human wants vary in urgency and intensity. They are partly determined by external

1. Ely and Others—*Outlines of Economics*—1930 p. 4.

stimuli and partly by our own nature. With animals and primitive people wants are mostly determined by external forces. In satisfying their wants they are governed by the natural order of urgency or intensity. But with the civilised man, it is the rational mind which controls and guides the satisfaction of wants. In their case it is the expected utility which determines the urgency of a want. The behaviour of animals is instinctive and there is little conscious direction towards want-satisfaction. There is no conscious maximising of utility. Governed by their natural instincts they feel and satisfy their wants imposed by forces around them. This is not the case with rational beings. They are not simply ruled by forces from without. They make a conscious effort in making the most of their limited resources and of maximising their utility. This is the case with most of us. This can be regarded as a normal behaviour of man in the economic sphere. Thus human behaviour is regulated with the object of maximising utility and maximum utility does not follow merely as a consequence of satisfaction of wants.

8. Not Maximum Satisfaction but the Attainment of the State of Wantlessness is the aim of Human Activity.¹ A new definition of Economics has been given which seems to be in accord with the Indian genius especially that of ancient Indians. It is said that it is for the short-sighted people that Science of Economics studies human behaviour which aims at maximising utility. Those who are wise do not take such a short-sighted view. They rather aim at attaining happiness which is the outcome of a state of wantlessness.

When a man feels a want, he experiences some sort of pain. When want is satisfied the pain is removed. It is negative gain and not positive advantage. At the most in some cases the satisfaction of a want results in an agreeable experience, a sort of pleasure. But pleasure is not happiness. Pleasure is something transient. The satisfaction of a want puts the consumer under the influence of a sort of opiate whose effect is temporary. It is like morphia injection. The effect is temporary and the pain recurs.

Similarly, satisfaction of a want does not end the matter. Old wants recur and new wants arise. Man is caught in the spiral of ever-mounting wants. The way to happiness does not lie that way. Maximising utility or satisfaction leads only to temporary removal of pain. But the soul of man yearns for more and more.

On the other hand, if a man treads the rough and rocky path of discarding wants rather than satisfying them, he treads the path of wisdom. It will bring him contentment and happiness. According to western standards his life may be drab and dreary, yet it is one which will take him beyond shallow and transient pleasure. Wants satisfied will recur but wants discarded never will. The aim of human behaviour should be not to maximise utility, but to

1. See J K Mehta—Advanced Economic Theory, 1948, pp 7-14

minimise wants till he has gained freedom from wants. We can never attain this freedom by yielding to our desires and satisfying them but by controlling and discarding them.

It is not possible to discard all the wants. The process of selection, of which Robbins speaks, will have to be applied. When we have attained the state of wantlessness we may perhaps cease to be human beings. Process of pick and choose will then come to an end. Human behaviour should be directed towards this end. "Removal of wants gives pleasure but absence of wants gives something better ...happiness".

✓9. **Valuation—the Central Problem of Economics** Let us think once again of the fundamentals of Economics as enunciated by Robbins, viz., the scarce means and the multiple ends. The resources available to a community are limited in quantity but, because human wants are unlimited and the resources are capable of alternative uses, the demand for these resources is very great. Scarcity gives them a price in the market. In case they had been free goods, the problem of valuation would not have arisen at all. The problem of value arises on account of multiplicity of wants and scarcity of means.

Economic activity consists in the utilisation of scarce means to the best advantage of a person. This obviously cannot be done without evaluating the resources and without comparing their relative utilities. Valuation is the problem of exchange and exchange is the connecting link between production and consumption. It brings producers and consumers together. It is thus literally the central problem.

We have to face the problem of valuation in all the departments of Economics. In consumption we are concerned with the satisfaction of wants. The consumer wants so many things to satisfy his wants and he is constantly faced with the problem, 'at what price'? The goods that he wants are scarce, he cannot have them free. To what extent he is able to satisfy his wants depends largely on the level of prices prevailing in the market. Can it therefore be doubted that the problem of price or value is the most important problem for a consumer?

Think of the producer. He has to employ land, labour and capital—various factors of production in his business. He must make very careful calculations of the prices he has to pay for them. A little want of care on his part will change a handsome profit into a lamentable loss. Just as the consumer wants maximum satisfaction, the producer wants maximum profit. He must devise the most economical combination of the factors of production. Can he do it without going through the valuation process? The problem of valuation is, indeed, an important one from the producer's point of view.

The third branch of Economics is exchange which is concerned with price-determination. Price determination is valuation. Who is

not aware of the price fluctuations in the market ? Prices vary from time to time and from place to place. The price of wheat in 1939 was Rs. 2/8/- per maund and it was Rs. 12/- in 1948. Price of sugar in India is Re. 1/- per seer (May 1948) but Rs. 3/- per seer in Pakistan. Why is it so ? All this is the problem of valuation, and the Government and the public are alike worried about the course of prices. Their importance to the economic life of a nation is indeed vital.

When we pass on to the fourth branch of Economics viz., distribution, the problem of valuation assumes no less importance. Here we are concerned with the determination of rent, wages, interest and profit. Rent is the price paid for the use of land, wage is the price of labour, interest is the price of capital and profit the price of enterprise. In exchange we are concerned with valuation of goods but in distribution with the valuation of the services of the various agents of production. The well-being of these agents depends upon the respective shares that they receive out of the national dividend.

Thus in all branches of Economics, the problem of valuation is the most important problem. It may rightly be called the central problem of Economics.

There are several forces which exert their influence on valuation. Detailed analysis of these forces we shall defer till we come to the discussion of problems of exchange. Let it suffice to mention here that besides the forces operating on the side of demand and that of supply, the state can also exert a great influence on the course of prices. Apart from direct price control, the state can influence prices through its taxation policy as well as by its Store Purchase policy. Prices also greatly depend on the form of economy. Under capitalism prices will be determined by competition, perfect or imperfect. Prices will find their own level through the unfettered operation of the forces of demand and supply. A Socialist State may subsidise commodities consumed by the poor and sell them at less than the cost. A Fascist State fixed a price which it regards fair.

Valuation is not only an important problem but also a complex one. It is not always easy to disentangle the influences operating on it.

10. Institutionalism in Economics. A brief mention may be made of a new school of economists called the institutionalists. They are mostly Americans and W. Mitchell may be regarded as their leading representative. In India Prof. Radha Kamal Mukerjee has made a valuable contribution to institutionalism in Economics.

The institutionalists seek to give a new twist to economic studies. Instead of studying individual behaviour they concentrate on the study of social behaviour. They define Economics as a science of social behaviour. Naturally study of social institutions

occupies their mind largely. They believe that human behaviour can be controlled and improved. Improvement of human behaviour is their principal aim.

To Adam Smith's doctrine of 'self-love' and self-interest the institutionalists are strongly opposed. They regard this trait as anti-social and unbecoming to the dignity of man. They do not believe man is so selfish as that. He has social instincts and it is the function of a good economic system to bring out the best in him.

The institutionalists mostly rely on inductive method as a means of economic investigation. They are more realistic and make a liberal use of the statistical information at hand. They deprecate abstract or deductive reasoning.

There are those who do not lay much store by the literature published by the institutionalists. Nevertheless their's is a point of view which deserves due recognition. After all man does not live alone. He is a social animal. It is only right that his social behaviour is made a subject of special study.

11. The Rationale of Economic Activity. We find all around us people busy in various walks of life in the pursuit of wealth. The farmer, the factory labourer, the clerk, the teacher, the doctor and every man of profession is engaged in making money. But money in itself is of little use. What he is really after is not money but the amount of goods and services that he can buy with money. It is the desire for the enjoyment of consumers' goods that is responsible for the starting and the running of the machinery of production. Herein lies the rationale of all economic activity in the world. The entire productive apparatus is directed towards the production ultimately and finally of the consumers' goods.

12. Opportunity Cost. It is not, however, possible to supply to the consumers all the goods and services they would like to enjoy. The resources of the world are limited. The factors of production with which to bring the consumers' goods into existence are not to be found in a state of super-abundance. If that had been the case all economic problems would have ceased to exist. The means being limited and the wants clamouring for satisfaction being unlimited, we have to pick and choose. Of the two alternatives before a person the one which is forgone is the price or cost of the one which has been chosen. This cost is known as the Opportunity Cost. With a certain amount of money I may be able to see a cricket match or go to a cinema show, and if I may choose the latter then the cricket match which has been sacrificed is the opportunity cost of the cinema show I have enjoyed. This is also called Displacement Cost. The concept of opportunity cost does not only concern a consumer, but the producer too. He has also to choose an economical combination of factors of production. He must substitute labour for machinery and *vice versa* and thus accept one alternative and reject another. In the realm of exchange, again the concept of opportunity cost exerts its

influence. If with a given set of factors you can either produce this assortment of commodities or that, then the opportunity cost ratio will determine their relative prices, because the price of a commodity produced by a factor must in the long run be equal to the price of another commodity which the same factor is capable of producing.

13. Economic Decisions. Any decision made in connection with the utilisation of scarce means for the satisfaction of unlimited wants is an economic decision. With the limited resources at our disposal, it is impossible for us to satisfy all our wants. Economic decisions are necessary to determine which wants to satisfy and which to relinquish. Choice is a fundamental necessity in the economic world arising out of the fact of multiplicity of wants and scarcity of means. This choice is embodied in the form of countless economic decisions taken by numberless scattered individuals.

Economic decisions may be private decisions or business decisions. The private individual has a limited amount of money, property, time and other resources at his disposal. It is manifestly inadequate to meet all his desires, real or latent. He must decide which desires should be satisfied and which should remain unfulfilled. His decisions will depend upon his own tastes and environments. They are more or less subjective, and it is difficult to formulate any hard and fast rule about them. The business man, too, has to decide what use he should make of the productive resources of land, labour, and capital at his disposal. We know his aim is to maximise his profits. His decisions, unlike the decisions of a private individual, are capable of being looked at more objectively. But in the case of both, the fundamental problem is the same, viz., the proper utilisation of scarce means which can be put to alternative uses. This is what Economics is concerned with. As Roll puts it, "Economics studies activity of husbandry."

✓ **14. Economics a Science?** "Whenever six economists are gathered," says Wootton, "there are seven opinions."¹ Such being the degree of unanimity attained by the economists, the claim of Economics to be regarded as a Science has been challenged. Wootton says again, "Economists are under the suspicion of being charlatans and they cannot afford to arrogate honourable titles to themselves without proper justification.....In the increasingly common application by theoretical economists of the term science to their studies there is an element of wishfulment." Further, "the zealous student of Economic Science would do well from time to time to remind himself that of all the demand and supply schedules, cost curves or indifference curves that give so formidable appearance to his text-books, not one (unless by accident) is founded upon fact.....The reader would search far and wide through the works of analytical economists before he came upon a single predic-

1. Wootton—Lament for Economics, 1938, p. 14.

tion endorsed by the weight of authoritative opinion of the course of events to be anticipated in any concrete historical situation."¹

It is further pointed out that men being endowed with a freedom of will, which is after all not illusory, and that economic phenomena being highly complex, varied and variable, it is difficult, nay impossible, to build up a science on such a slender footing. The claim of Economics to be called a Science seems to have been, therefore, completely demolished. But it is not so.

Whether a particular branch of learning is entitled to be regarded a science or not, depends on what we consider a science to be. If we expect a science to formulate laws applicable everywhere and at all times without any reservation and qualification, and if we expect it to predict the future course of events, then frankly speaking Economics is not a science. But these requisites of a science do not accord with modern notions as to what a science is. By science we understand a systematized body of knowledge and not merely a collection of facts, so that the facts speak for themselves. In the words of Poincare, "Science is built up of facts as a house is built up of stones; but an accumulation of facts is no more a science than a heap of stones is a house."

There is an almost complete agreement on the point that Economics fully deserves the title of a science although by the very nature of its raw material, it cannot be as perfect and as exact a science as some of the natural sciences. The Economic Science has by now attained a fair degree of maturity. The economist has collected his facts which are fairly of a homogeneous type. The facts have been carefully analysed and put under suitable classifications, and general principles governing these facts have been discovered and enunciated. What more is needed to make it a science? In short, economic study has indeed become systematised. Besides, the economists use all the paraphernalia of a science, i.e., the scientific methods; and they conduct the economic inquiry in a scientific spirit keeping their own prejudices and predilections entirely in the background. They try to look at their facts in as objective a manner as possible even in matters in which the inquirer may himself be vitally interested. Economics is, therefore, a full-fledged science and some economists claim for it perfect equality with other sciences. "Economic Laws are on all fours with the propositions of all other Sciences."² It is time that this pedantic and barren controversy is laid at rest.

✓ 15. **Is Economics Also An Art?** It has been settled that Economics can be called a science, but can it be treated also as an art? The English economists are agreed that economics is only a science and not an art. "The type of science that the economist will endeavour to develop must be one adapted to form the basis of an art. It will not, indeed, itself be an art." "It is a science pure and applied, rather than a science and an art." (Marshall).

1. *Ibid.*, pp., 112-118.

2. Robbins *Op. Cit.*, p 104

it does not study man as an isolated individual who has renounced the world and has gone to live in the jungles or in the mountain caves. It studies, on the other hand, men who live in society affecting society by their actions and themselves exposed to social influences. Economics is not so much concerned with "the economic man"—an abstraction, but man of flesh and blood and the man whom we actually see in the world, swayed by ordinary motives, noble or ignoble, and having his ordinary share of human virtues and weaknesses.

We have also arrived at the conclusion that Economics is both a science and an art. The English economists generally hold that it is not the function of Economics to solve practical problems. Although economic aspect of these problems may be very important and the economist's opinion will be of very great value, yet no problem can be solved on economic grounds alone, for the political and moral considerations may also be involved. "*The theory of Economics does not furnish a body of settled conclusions immediately applicable to policy. It is a method rather than a doctrine, an apparatus of the mind and technique of thinking which helps its possessor to draw correct conclusion.*" (Keynes).

We do not quite agree with this view. No economist has lived up to this ideal. Adam Smith, Ricardo, Malthus and in our times, Lord Keynes, have all actively interested themselves in the problems of their time. In the words of Fraser, "*An economist who is only an economist is a poor pretty fish.*" According to Tugwell it is only a premature flowering of Economics, which is responsible for its separation from practical life. Wootton complains that "we spend too much time forging theoretical tools and too little time in trying to make practical use of them." When we study Economics, "*our impulse is not the philosopher's impulse, knowledge for the sake of knowledge, but rather the physiologist's knowledge for the healing that knowledge may help to bring.*" (Pigou). Our view, therefore, is that the economist must lend a helping hand in the solution of practical problems and he is in a much better position to do so than a statesman who is devoid of the knowledge of economic theory.

As to the question whether Economics should pronounce moral judgments, the English Classical School was of the view that it was none of the functions of the economist to comment on the rightness or wrongness of the economic position. Senior thought that the economist could not add even one word of advice. Cairnes said Political Economy stood neutral as regards ends as mechanics stand neutral between rival schemes of railway construction. Recently Robbins has reaffirmed this neutrality. It has been emphasised that *Economics is concerned with the means and the ends lie outside its scope*. Economics is not concerned with the desirability or otherwise of the ends. It is said that *the function of the economist is to explore and explain and not advocate and condemn*. This, in our opinion, is not the right view.

We agree with Hawtrey that Economics cannot be dissociated

from ethics. There is an "economic ought." Having analysed, for example, the causes of the maldistribution of wealth, why should the economist fight shy of saying that it ought to be better distributed? "A non-psychological Economics must, therefore, be regarded as either a superficial fragment or as positively non-scientific. It is Hamlet with Hamlet left out"¹ Economics, therefore, is both a positive and a normative science and we do not agree with Robbins when he says that the gulf between positive Economics and normative Economics is so wide that no human ingenuity can bridge. On the contrary, the tendency during the last half a century is that *Economics is becoming more and more "Political Economy"*. The scope of Economics is being widened so as to include politics, ethics and religion. The function of Economics is, therefore, not merely to describe, analyse and generalise but also to furnish guidance in the practical affairs of the world.

17. Methods of Economic Science. One of the grounds on which Economics has been recognised to be a science is that like other sciences, it, too, uses the scientific methods. Let us now see what these methods are.

The early English economists, known as the Classical School, tried to build up the science of Economics from a few simple generalisations and the method that they used is called the Deductive, Analytical, Abstract or *a priori* method. Among these may be mentioned Senior, Mill, Cairnes and Ricardo, the latter being the chief exponent. The advocates of this method start with a few indisputable facts about human nature and draw inferences about individual concrete cases. For example they believed that self-interest alone guides men in their daily life and they tried to explain and predict all human behaviour in terms of self-interest, which was obviously wrong.

This method has the merit of being simple, effective and certain, provided the assumptions are valid. This is a very big "IF" indeed. More often than not, the assumptions turned out to be unsound, untrue or only partially true. They made Economic Science dogmatic for they refused to admit that there might be some flaw in their premises. The Deductive Method proved particularly dangerous when universal validity was claimed for generalisations based on imperfect or incorrect assumptions and attempts were made to formulate practical policies of the nation in the light of these generalisations.

There was naturally a reaction against this and a new school called the Historical School arose. The reaction was specially marked in Germany and was represented by economists like Roscher, Hilderbrand and Frederick List. The new movement had also its supporters like Cliff Leslie in England. They advocated a method which has come to be known as Historical, Inductive or Realistic. This method insists on the examination of facts and then laying down general principles. Here we go up to "generals" from "particulars"

¹ Wolfe in Tugwell's Trends of Economics, 1935. p. 466.

whereas in the Deductive Method we come down from "generals" to "particulars."

The main weapons in the hands of inductive economists are observation and experiment. This method has the merit of being based on facts and having, therefore, a surer foundation. But the danger is that hurried conclusions may be drawn from insufficient number of facts. Some important facts may have been ignored and the conclusions may be unwarranted. Besides, observation and experimentation have a very limited application in a science which deals with human activities.

But as against this it may be pointed out that although conscious experimentation is simply out of the question in Economic Science, yet history affords a number of experiments in the form of economic measures adopted from time to time. The granting of discriminating protection in India is one big experiment. In modern times the application of the Inductive Method has been very much extended. There is a spate of statistical publications in every country. The "blue books" are full of facts and figures and the economist has a large and reliable supply of the material from which to draw his conclusions. The modern era has been called the Inductive Era.

The modern economist, however, does not rely on one method to the exclusion of the other. He uses both. In the oft-quoted words of Prof. Marshall, "*Induction and Deduction are both needed for scientific thought as the right and left foot are both needed for walking.*" The economist first starts tentatively with a certain hypothesis based on deductive reasoning and then tests it on the touch stone of facts and the hypothesis is elevated to the plane of a theory. Further checking in the light of the prevailing situation has to be done before the theory can be changed into a law. There is thus what Eric Roll calls interpenetration of deduction and induction.

Thus "*the true solution of the contest about method is not to be found in the selection of deduction or induction but in the acceptance of deduction and induction.*" (Wagner). Which of the two methods is to be used on a particular occasion, depends on the nature of the inquiry, the material in hand and the stage at which the inquiry has reached.

18. Laws of Economics. Like every other science Economics, too, has drawn its own set of generalisations, which are called the laws of Economics. These laws are supposed to govern and explain all economic activity. In the words of Marshall they may be defined thus :—

"*Economic laws, or statements of economic tendencies, are those social laws which relate to branches of conduct in which the strength of the motives chiefly concerned can be measured by money price.*" In terms of Robbins' definition of economic activity we might say that economic laws are statements of uniformities which govern

applicability. The Classical Economists, were of the opinion that economic laws were immutable, eternal, inexorable and so universally applicable without any qualification whatsoever. The Historical School, on the other hand, emphasised their relativity and insisted that they had only a limited application to a given environment. Bagehot, for example, declared that the laws of Economics propounded in England were applicable to "a grown up society of competitive commerce." Modern economic opinion inclines to the view that inasmuch as economic laws are based on essentials of human nature they have a very wide application to almost all communities, although in formulation of actual economic policies allowance must be made for varying local conditions. Who can doubt that Gresham's Law, Quantity Theory of Money, the Law of Diminishing Utility, the Law of Choice and a host of other economic laws are independent of sociological and political conditions? Given the conditions under which they are true, the conclusions to which they point are inescapable.

19. Relation of Economics to Other Sciences. All sciences have been developed by man for the service of man. Economics being a science of man *par excellence* and concerned with human welfare more than any other science must freely draw on every other science especially History, Mathematics, Statistics, Physical Sciences and Psychology. It does not seek to establish or explain the laws of physical sciences but simply uses them as bases for its own reasoning, e.g., the Law of Diminishing Returns has been derived from the physical properties of the soil. Of psychology it has made much greater use. The Law of Choice which is the most fundamental law of Economics has a psychological basis. Mill described Political Economy as "a moral or psychological science". Jevons made it even more psychological. To him the theory of Economics is "the mechanism of utility and self-interest" and "entirely based on a calculus of pleasure and pain."

The relation of Economics to the other social sciences is very intimate indeed. Philosophers like Comte would subordinate Economics to, and include it in, Sociology, the general science of society. But Sociology still awaits development, whereas Economics has attained an advanced degree of maturity. As such it is capable of being studied separately. This specialisation is highly conducive to scientific thoroughness, although it is wrong to think of it as an entirely independent science. Complete segregation between Economics and Sociology is out of the question.

Economics is very closely connected with Ethics for all economic activities, must be coloured by ethical considerations. When we discuss production and distribution, we must keep high moral ideas steadily in view. Economic activities must be conducted on a moral plane. By the ancient economic thinkers, Economics was completely subordinated to Ethics. It was "not merely attendant and the hand-maiden of Ethics; she was crushed and blotted out by her more prosperous and pampered sister."

In the same way Economics depends on Jurisprudence, or the science of law. Economic activities must be conducted within a legal frame-work. The economist cannot countenance predatory activities, however lucrative they may be. The system of law limits and determines our economic activity.

Economics and History, again, are closely allied. History furnishes the necessary background against which we can have a better appreciation of economic theories and problems. Knowledge of history enables us to get a clear insight into the problems of Economics. By means of history we are able to confirm or disprove of old theories and discover new ones. The discovery of gold mines throws a new light on the quantity theory of money and occurrence of Black Death threw in bold relief the demand and the supply side of labour. Similarly, history has largely contributed to formulation of theories of trade cycles. But whereas Economics owes a debt to history, knowledge of economic theory, too, is of immense value to the historian. As a matter of fact history which omits an analysis of economic conditions is incomplete history, if not a misleading one. It has been well remarked :

} Economics without History has no root,
 } History without Economics has no fruit."

Of all the sciences relation of Economics with Political Science is the closest. It has already been mentioned that Economics is more and more becoming political economy, the implication being that it is more and more becoming inextricably mixed up with politics. To the statesman economic considerations are the most important. He must take into consideration the economic habits and institutions before embarking on a certain political policy. The economic considerations are paramount in determining political policies.

In the same way political conditions and institutions have a far-reaching influence on the economic conditions of the country. Few can deny that economic development in India has been very largely influenced by the political factor. Politics and Economics thus act and react upon each other. Every current political problem is predominantly economic in character. The present war like any other war, in modern times, is the outcome of a scramble for markets and materials. The Hindu-Muslim problem in our country is essentially an economic problem. It is a desire to further economic interests of the community which goads the people on for struggle for political power. The setting up of Economic Advisory Councils or the "Brain Trusts" to advise the politicians shows that Economics is becoming more and more a hand-maid of politics.

20 Utility of the Study of Economics. The economist can legitimately be proud of the fact that, in a way, his science is decidedly more useful than any other branch of learning. No other science makes human welfare its direct and primary concern. The

economist, in his own humble way, tries his best to contribute to human welfare.

Economics has great *intellectual value*. Those who devote their time to the analysis and understanding of economic problems are amply rewarded with the sharpening of intellect. The study of the various theories of value, of wages and of interest and unravelling of the mysteries of foreign exchanges and the attempt to understand intricate currency and financial problems provide an excellent mental gymnastics.

There is also the *cultural value* of the study of Economics. The student of Economics is initiated into the mystery of the working of the economic machine. He comes to understand how automatically it goes on working without apparent jolts and jerks without any presiding genius to direct it. Every individual is a worker in this vast and complex productive system. He has also his own contribution to make it the cumulative result. This teaches him the lessons of economic interdependence. It gives him a sense of pride, a sense of responsibility and better appreciation of the scheme of things. He can take more intelligent interest in his work. This is no small gain. In any scheme of mental culture, Economics must form an indispensable element. A person without elementary knowledge of Economics must be considered a semi-educated person because so much of what is happening around him has economic implications which he may fail to grasp. A great deal of what appears in the daily papers is unintelligible to him. A mere mention, for example, of sterling balances and of inflation meets with a stupefied look. Cultural value of Economics cannot, therefore, be exaggerated.

The *practical importance or vocational value* of Economics is also very great. To the statesman, the knowledge of Economics gives a better grasp of the political problems that face us, to the solution of which he brings to bear more imagination and more sympathy. For the finance official a knowledge of Economics is indispensable. To the labour leader it is of help for the understanding of the industrial situation and it enables him to fight the battle of labour against capital more effectively. He will know when to press his demands strongly and when to yield gracefully.

Economics is the strongest ally of the business man. He can learn the principles of business organisation. He will be able to plan his business well and tackle the problems of production and marketing more successfully. To the business man it thus renders direct assistance. The breadth of vision which the study of Economics necessarily gives, stands him in good stead in times of difficulty. It is really difficult to think of any aspect of human life, with its multitudinous activities, where the knowledge of Economics is not useful. It is a living science dealing with concrete realities of life. "You cannot," says Wootton, "be in any real sense a citizen unless you are also in some degree an economist."

21. Economic Freedom. There are three aspects of economic freedom which is enjoyed by the people under a modern capitalist system. In the first place, a person is free to use his property in any manner that he likes and he has not to submit to any dictation from any superior in this respect. Secondly, he is free to start any business or enter into any profession he chooses. This is known as freedom of enterprise. The individual entrepreneur actuated solely by the motive of self-interest and profit, like the 'economic man' initiates production and takes risks. The state does not seek to drive entrepreneurial activity into marked channels. Lastly, there is the freedom of contract. Individuals are free to contract business alliances and settle the terms as they suit them, resting assured that the state will uphold them.

But there is no absolute freedom in these matters. They enjoy but a relative freedom. Every enlightened state imposes certain restrictions on this economic freedom in the interest of the larger freedom of the community. The enjoyment of economic freedom is subject to general welfare. No one can use his property or enter into a contract or start an enterprise which is in any way detrimental to the community or any component part thereof.

22. Price Mechanism. A very noteworthy feature of the present economic system is the 'pricing process'. The price-mechanism functions in such a manner that the adjustments in the economic system take place almost automatically without any direction or dictation from a central authority. Price is the regulator of both production and consumption. The consumers are able to convey their preferences through the prices they are willing to offer. Similarly, the producers are able to indicate the scarcity or abundance of a commodity by means of the price they are willing to accept. If price rises, it will check demand and stimulate supply and *vice versa*. If there is a greater demand for a commodity than the supply thereof, adjustment between the two will be brought through the rising of the price. Conversely, if the supply is greater than the demand, the price will fall and equate the two.

The same type of dove-tailing is effected in the sphere of distribution where we are concerned with the remuneration of services of agents of production. Rent, wages, interest and profit are the prices paid for factors of production. If there is a large supply of labour, wages will fall and induce the employers to employ more and absorb the supply. If, on the other hand supply of labour has been curtailed by war or epidemics wages will rise and give a warning signal to the employers of this shortage.

The price obtained either for a commodity or a service constitutes an income which through its purchasing power determines the extent and the direction of economic activity. There seems to be every justification, therefore, for the present system to be designated as a 'government by price'.

The price-mechanism is supposed to have harmonised the

interests of both the consumers and the producers. In the words of Benham 'it tends to harmonise the desire of entrepreneurs for profits and the desire of consumers to satisfy their wants as fully as possible from the factors of production available.' This harmony is, however, not always realised in actual practice. We may find that either the consumers are being exploited or the entrepreneurs are suffering. While the consumers enjoy the benefits of cheap production, they are sometimes deliberately defrauded, or they are at the mercy of the monopolist. On the other hand, the producing company may suffer because of inefficiency of the directors or because directors are enriching themselves at the expense of the company. Thus we generally find divergence rather than harmony between the interests of consumers and producers, for the price-mechanism does not often work smoothly and freely.

23. Division of Economic Study. The traditional method of dividing the study of Economics is to split it into four parts—Consumption, Production, Exchange and Distribution. This is in keeping with the old definition of Economics, *viz.*, that it is concerned with man's actions in consuming, producing, exchanging and distributing wealth. This mode of treatment cannot fit in with the new definition of Economics given by Robbins, according to which Economics is concerned with the problems of choice, arising out of disposal of scarce means in relation to multiplicity of ends. A different treatment of the subject is called for to bring out the implications of this new conception of Economic Science. The traditional method is, therefore, regarded as unscientific. The modern approach is to treat the subject as a whole rather than split it up into different compartments.

But we feel that in an elementary study like the present one, the traditional method will be more suitable. It will make for simplicity and clarity and specially suit the students who are not engaged in an advanced study of the subject. While we adhere to the old treatment, we shall of course take notice of the latest developments in Economic theory respecting each department of our study. We shall divide our study into four compartments or departments, *viz.*, Consumption (or demand), Production (or supply), Exchange (the balancing of the two) and Distribution (sharing of the national income).

In Consumption we shall study how limited means are utilised for the satisfaction of unlimited wants. We shall take note of the characteristics of human wants and the various laws governing their satisfaction, *e.g.*, the Law of Diminishing Utility, the Law of Substitution and analyse the concept of Elasticity of Demand and Consumer's Surplus. We shall also examine the idea of the Sovereignty of the Consumer. We take Consumption first, as it furnishes the initial impulse and driving force for economic activity.

The study of Production will consist of the study of the four Agents of Production, their relative efficiency and the way they combine and co-operate to produce wealth. In the terms of new Economics we shall find how the limited means for the satisfaction of unlimited wants are obtained. Production will acquaint us with

CHAPTER II

GOODS, WEALTH AND VALUE

1. Introduction. In the first chapter, we have made a preliminary and rapid survey of the nature of Economics and the main features of our economic system. But before we begin a detailed study of the subject, it is necessary to fix in our mind the precise meaning in which we shall frequently use certain terms. This will avoid much unnecessary confusion. One source of difficulty in the study of Economics is that it uses terms of ordinary speech, giving them scientific meanings. Some of the more important of these terms are explained below :—

2. Goods and their Classification. The term 'good' or 'goods' is used in Economics in a special sense. *Anything which is capable of satisfying a human want is called a 'good'.* Air, bread, table, etc., are all wanted or desired for the satisfaction of human wants and are therefore 'goods'. Everything desirable is a 'good'.

Goods may be classified as under :—

(1) *Material Goods, e.g., bread, chair, books, etc.*

Non-Material Goods, e.g., goodwill.

(2) *Transferable Goods, e.g., house, land, furniture, cattle.*

They are not necessarily bodily transportable.

Non-Transferable Goods, e.g., a person's faculties or capabilities his skill, his intelligence, etc.

(3) *Personal Goods, e.g., skill, intelligence, etc.*

Impersonal Goods, i.e., the things which are external to a person or which may be possessed by him.

(4) *Durable Goods, i.e., those which continue giving service for a long time, say for years, e.g., house, furniture, etc.*
There are different degrees of durability.

Perishable Goods. They are finished up in the course of one satisfaction, e.g., meal, and are not capable like the durable goods, of giving a series of satisfactions.

(5) *Public Goods* are those which are public property, i.e., owned by the municipality or government, e.g., townhall, public library, college building, etc.

Private Goods. These goods are the property of private individuals, e.g., a person's house, land, cattle, etc.

(6) *Consumer's Goods, Consumption Goods, or Goods of the First Order.* These goods directly satisfy the consumers' wants. They yield satisfaction directly. They are wanted for their own sake, e.g., bread, clothes, house, etc.

Producers' Goods, Production Goods or Goods of the Second or Higher Order. These goods yield satisfaction only indirectly. They are desired not for themselves but for

painful efforts to acquire them. "*It may be said, with an appearance of a paradox, that more things in the nature of wealth a community has, the less prosperous it is.*" (Taussig). This is so because the welfare of the community does not solely depend on wealth, i. e., scarce or economic goods. Free goods make their own contribution to human welfare. If more goods belonged to this category, human welfare will be more easily promoted and it will be more widely spread.

3. Utility. We have seen above that every "good" or commodity possesses a quality by virtue of which it satisfies a human want. This want-satisfying power is known in Economics as utility. *Anything which satisfies a human want, directly or indirectly is said to possess utility*, the want may be sensuous or otherwise. It is the value-in-use of a commodity.

When we say a mango has 10 utility and a piece of pastry 7, we simply wish to declare our scale of preferences and indicate relative degrees of our satisfaction from the consumption of these two commodities. Utility is, therefore, simply a conventional representation or an objective expression of something subjective, i.e., our degrees of preferences. Utility indicates the intensity of desire.

Every article possesses some inherent qualities on account of which it satisfies a human want. But when we speak of utility we do not refer to such *intrinsic qualities of a commodity*. On the other hand, we are thinking of the commodity in relation to the wants of an individual. A cigarette, for example, has some quality in itself on account of which it is capable of satisfying a human want. But to a non-smoker it is of no use. He does not want it. For him the cigarette possesses no utility. *Utility is, therefore, subjective and relative*; it is not objective. It lies not merely in the commodity itself, but in the mind of the consumer. It simply indicates the reaction of an individual and not of the society at large. It relates the consumer to the commodity. Being subjective it varies from individual to individual. The same thing may possess some utility for one person, more utility for another, and no utility at all for a third person. A horse has no utility for one who cannot ride and a picture for one who cannot see. A person who has no ear for music or an eye for a work of art will be insensible to any artistic beauty. He cannot appreciate it. Obviously so far as he is concerned, such things possess but little utility. In the words of Chapman, "external goods are goods only in relation to internal goods."

It is not merely from individual to individual that utility varies. It may vary in the case of the same individual at different times. A change in the tastes, season, or fashion, even advertisement and propaganda may affect the utility of a commodity or a service.

Utility may be distinguished from satisfaction. Utility is the power of the thing to yield satisfaction. Satisfaction is what we get, it is the result of utility. When we eat a fresh, ripe and sweet mango we are pleased. The freshness, sweetness and the ripeness and other qualities of the mango constitute the basis for the utility

it possesses, but it is on account of these that we get satisfaction. The thing possesses utility, it gives us satisfaction.

A distinction of greater importance exists between utility and usefulness. The two words are often confused in the ordinary speech and are used as synonyms. But if a thing possesses utility, it does not necessarily follow that it is useful. Smoking is not useful. Drinking of wine and the use of other intoxicants are harmful. But in the eyes of the economist cigarettes, wine and all such things possess utility, for the simple reason that there live people who are prepared to pay for them, and whose wants they satisfy. Here the moralist and the economist do not see eye to eye with each other. The economist does not look at things from the moralist's angle of vision. He is not swayed by ethical considerations when he wants to know whether a thing possesses utility or not. His simple test is "Does it satisfy a human want?" Is anybody prepared to pay for it in order to obtain it for his consumption? If the answer is in the affirmative, the commodity possesses utility beyond doubt, however harmful the consumption may be. *The term utility has thus no ethical significance.*

It may also be mentioned that the term utility refers only to consumers' goods and not to producers' goods. A bicycle has utility for one who uses it. It gives him satisfaction. But the machinery used in the making of the bicycles gives no such satisfaction to its manufacturer. He is solely guided by the motive of profit and does not get any personal satisfaction from the machine. Utility refers to personal satisfaction and not satisfaction in any other sense.

It is sometimes suggested that we should use "desirability" in place of utility. But this would be open to the objection pointed out above. "Desirability" implies moral consideration, whereas utility is morally neutral. The thing may be undesirable but if there are fools enough to buy it and use it we shall say it has utility.

A better suggestion is the use of the term "significance." It has already been used by some economists, e.g., Wicksteed. It is free from the objections mentioned above. A thing possesses economic significance whether its use is undesirable or injurious, provided it is scarce in relation to human wants. But the term utility is much more current in the language of Economics and we, too, shall stick to it.

4. Value. Value is another term which has often caused confusion in economic thinking. In the words of Adam Smith, "the word value has two different meanings and sometimes expresses the utility of some particular object, and sometimes the power of purchasing other goods which the possession of the object conveys." But the modern use of the word value differs from Adam Smith's."

The economists now do not use value in two meanings but only in one. For the first use of the word mentioned by Adam Smith,

viz., value-in-use, they use the term utility. *The word value is used in the second sense, i. e., value-in-exchange, actual or potential.*

Value of a commodity simply means what other commodity or commodities can be got in exchange for it. Value is the power of a commodity to command other things in exchange for itself. If a fountain-pen can be exchanged for two copies of your text-book, the value of the pen is equal to two text-books. When value is expressed in terms of money it is called *price*.

Can there be a general rise in values or prices? Value is relative. You cannot speak of the value of a commodity in absolute terms. You cannot for example say that the value of a particular commodity is great, without at the same time having a number of commodities that it can buy at the back of your kind. Value is relative because it expresses relationship between commodity and commodity. It builds a bridge of equation between the two. Value of one thing is thus connected with the value of another thing. It, therefore, follows that *there cannot be a general rise in values: although there can be a general rise in prices.*

Let us understand why there cannot be a general rise in values. To take our previous example : 1 Fountain Pen = 2 Books. If the value of the fountain pen increases, it will buy more books than before. In other words, the value of the books will go down. If, on the other hand, the books go up in value, the purchasing power of the fountain pen goes down. The value of both things cannot go up simultaneously. As the value of one thing is expressed in terms of another if the value of the former increases, the value of the latter must go down, for it can only increase in terms of the other. Thus value being relative, the values of all things cannot rise at the same time, *i.e.*, there cannot be a general rise in values.

But there can be a general rise in prices as it happened during the war. The price of everything has gone up. Prices of things are expressed in terms of money. There are two sides of the equation here, goods side and money side. In this case goods side has gone up, while the money side (*i.e.*, the value of money) has gone down. We have seen that in the equation the value of only one side can go up but not that of both sides at the same time. When, therefore, prices have gone up, it means the value of things has gone up but the value of money has gone down. Thus there can be a general rise in prices but not in values.

5. Wealth. There has been a good deal of difference of opinion as to what constitutes wealth and what does not. When Economics was defined as a Science of Wealth, it was considered imperative to settle the matter of the definition of wealth itself. Fortunately there is now a general agreement about the nature of this fundamental concept. Whenever the word "wealth" comes to our mind, we at once think of cash, lands, buildings, machinery, furniture, mortgage rights, government securities, stocks and shares and so on.

Now if we attempt to generalise the nature of these "commodities", we shall find that they are all the objects of human desire. They are wanted because they can satisfy human wants, directly or indirectly. *In short, they possess utility.* We can, therefore, fix on one attribute which the things must possess before we shall agree to put them under the label "wealth".

But thinking further over the matter, we shall notice that the mere possession of utility is not a conclusive test to entitle a thing to be included in the category of wealth. Air possesses immense utility: it is even indispensable for human life. But is it wealth? Does anybody pay anything for it? No. It is not wealth. We can think of a host of similar "commodities", sunshine, sand on shore of the Arabian Sea, water coming out of natural springs etc. They are not wealth, because they are unlimited in quantity. Therefore *limitation or scarcity is another essential attribute of wealth.*

One more attribute is also necessary, viz., *transferability.* We want to possess such things, otherwise they will not command any price. Possession is impossible without transferability. Unless a thing can be passed on in exchange, it cannot be wealth to the owner. It is not bodily transfer that is necessary, mere transfer of ownership is enough.

To sum up, there are three essential attributes of wealth: (1) utility; (2) scarcity or limitation in supply; and (3) transferability.

Some other qualities are also suggested, e.g., that wealth should be susceptible of accumulation. But this is not always possible, for, as we shall see presently, "services" are included under wealth and they are not susceptible of collection.

Another requisite suggested is that it should be the result of labour or it should involve some sacrifice in its acquisition. This also does not accord with the facts: diamonds did not entail any great sacrifice on the part of one who first came by them; at any rate their value is out of all proportion to the labour expended in obtaining them. Take the case of land. It is not man-made; it is a free gift of nature; it did not cost much labour for the original occupant. But all such things are regarded as wealth in spite of the fact that no appreciable amount of labour was expended on them. Therefore the three attributes mentioned above are enough to settle whether a thing is wealth or not.

Wealth as defined above is synonymous with economic goods because they possess utility, are limited and transferable. In the words of J. N. Keynes "*wealth consists of all potentially exchangeable means of satisfying human needs.*" Anything which possesses value in exchange (in short value) is wealth.

Let us emphasise again one point. *Wealth is a relative term.* It is the attitude of man which makes things wealth. Human factor is responsible in converting things which were not wealth into those which are wealth. There are several things for which human beings

had discovered no use. They were free goods and not wealth. Several by-products of industry were thrown away as rubbish. Only recently in India molasses accumulated in the sugar factories to such an extent that they were even willing to pay something to those who would rid them of this nuisance. Setting up of distilleries changed them into wealth. Kalidas's dramas are no wealth to the barbarian. What is and what is not wealth depends on the human attitude towards the good or service concerned.

Wealth as understood in this sense includes all material and non-material objects and rights and benefits arising from their use, as well as all kinds of services provided they have exchange-value. This definition of wealth excludes highly commendable things like love, friendship and character, simply because they cannot be bought and sold.

Let us now apply these tests to certain classes of goods and see if we can regard them as wealth. Once again we must begin with a caution. We cannot dogmatically lay down that this is wealth and this is not. It is our own point of view and mental attitude that includes certain commodities in the category of wealth and excludes others. A thing may be wealth under certain conditions, in a certain place or at a certain time, and not wealth under entirely different set of conditions, *e. g.*, air is not wealth ordinarily, but becomes wealth in underground apartments, where money has to be spent in making provision for it. Now think of the following :—

Personal Qualities.—A surgeon's skill, a lawyer's debating talent, a person's intelligence and ability—are they wealth? These personal attainments are a source of wealth. We pay the surgeon for his skill. He has probably spent a lot of money and labour in acquiring it. But these personal qualities are not regarded as wealth. They are not transferable and hence not exchangeable. When we pay the surgeon we do not buy his skill but simply his service. His skill is inseparable from his person. Wealth does not consist of what a man is, but what he has, something external to himself. But such qualities of skill have been called *personal wealth* by courtesy.

Personal Services.—The services of the doctor, lawyer, teacher, domestic servant, etc., are they wealth? Yes, they are. These services may not result in the production of anything material and tangible, yet they satisfy the three tests laid down above. They can satisfy human wants and thus possess utility; they are scarce and exchangeable. They are rendered in exchange for money. A claim on a personal service can be acquired by means of money.

Money.—But what about money itself? It is said, in a modern community, it simply acts as a medium of exchange. Its value consists merely in this that it helps you to buy a commodity or a service. It has no value of its own. Now, this idea is wrong. Metallic money can be easily regarded as wealth, it has got intrinsic value, is scarce and exchangeable. But even paper money is wealth. It embodies purchasing power and just represents a collection of

commodities and services which the possessor of money can buy. Money has undoubtedly value in exchange. As a matter of fact that is its primary function. It is really surprising that any doubt whatsoever should have been cast on its being wealth. Money lubricates the productive machine and adds to the community's wealth.

Good-will.—Obviously intangible, but it is certainly wealth. It commands a price in the market. A firm which has laboured hard, made sacrifices and built up its reputation, can certainly count upon changing this reputation into money in the event of the transfer of the business to somebody else.

Documents of Title.—There is a large variety of documents which are regarded as wealth by their owners, e.g., cheques, bills of exchange, promissory notes, bills of lading, Government bonds or gilt-edged securities, stock and share certificates, insurance policies, mortgage deeds relating to land and buildings or other property rights. All these possess money value although in the case of insurance policies the money value is equal to its surrender value at the time. But they are mere scraps of paper and are not wealth in themselves. They are evidences or merely certificates as to the ownership of wealth. They represent wealth lying somewhere to which the holders of these documents have a claim. They have been, therefore, called *representative wealth*.

6. Wealth Classified. Attempts have been made to classify wealth. A common classification is given below :—

Individual or Private Wealth—The wealth of an individual, which has been called private wealth, consists of his material possessions like cash, land, buildings, furniture, etc., and other personal effects, titles to property, stocks, shares, government securities, patents and copyrights as well as intangible types like the good-will of his business, based on his reputation in the profession. His personal qualities, however, are excluded. His debts are deducted from his total wealth.

Social or Communal Wealth.—Under this category we shall put those forms of wealth which are not exclusively owned by individuals, but are the common property of all and can be shared by all. Examples of this type of wealth are : Public parks, public libraries, public buildings, government land or forests, roads, railways, government factories, and other property owned by the government, Central, provincial or local. These things are owned by the community collectively.

This type of wealth is increasing in volume and importance in modern times. The trend towards socialism which is noticeable in all countries is bound to result in the increase in this form of wealth.

National Wealth.—It is the sum total of all the wealth owned by citizens of the country. It is the aggregate of the economic goods possessed by them. While computing the total national wealth of the country, however, we should include not only the wealth owned privately by individual citizens but also social or com-

munal wealth owned collectively by the community. Debts due from one citizen to another will be, of course, ignored and so will be the patents and copyrights of the individual, for their lapse or destruction makes no difference to the community at large, though it will diminish the wealth of the individual concerned.

But National Wealth can also be defined broadly. In a wider sense many other things which may be considered national assets are included in the category of national wealth, such as mountains, rivers, healthy climate, good government, resourceful and energetic character of its citizens. In this sense the Himalayas, the Ganga and other such gifts of God can be included in our national wealth. *Cosmopolitan* wealth is the wealth of the whole world.

Negative Wealth.—Obviously negative wealth implies an obligation which must be offset against positive wealth. A debt is negative wealth to the debtor but positive wealth to the creditor. The patent or copyright is a positive wealth to the holder but negative to the people who care to respect these rights and refrain from using them. Similarly, government loans are negative wealth to the community as a whole, but positive to those who have to receive the payments. Some animals, besides being dangerous, do a lot of damage and may be considered as negative wealth. Rabbits in Australia at one time were in that position. Sind Government offered special facilities for the killing of pigs.

7. Capital Wealth and Income Wealth. A distinction is sometimes drawn between capital wealth and income wealth. The former is a fund or stock, while the latter is a flow. Capital wealth is supposed to be something fixed or static. It is used in production. This use yields a flow of income which may be considered as dynamic. A person having property worth Rs. 5 lakhs gets therefrom an annual income of Rs. 25,000. The property is capital wealth and what it yields is income wealth, or just capital and income, respectively.

8. Wealth and Welfare. One finds a continual but useless controversy going on among economists concerning wealth on one side and welfare on the other. We have seen that Economics makes wealth the centre of its study and not welfare. But it will be wrong to charge Economics with concentrating on selfishness and call it a dismal science. It is declared by economists that *wealth is studied not for its own sake, but because it promotes human welfare.* Wealth is the means and welfare the end.

It is now recognised that man's activities are not motivated by self-interest alone. "Economic man" an abstraction embodying self-interest is not the subject of economic study but real man, a creature of natural impulses, good and bad, and actuated by a variety of motives, fair and foul, and swayed by ideals, both noble and ignoble. Everybody seems to be after the money. But that does not necessarily make him a bad specimen of humanity moved solely by mercenary motives. *Money is not wanted for its own sake, but for the sake*

of commodities and services it will buy. What will make a man good or bad is not the acquisition of money, but the way in which money is spent. When, therefore, the economist studies wealth, welfare is not forgotten ; it is kept in the forefront.

Welfare is the real and the ultimate aim though immediately the attention is focussed on wealth. Economics, therefore, need not incur any obloquy for studying wealth.

Wealth is studied simply and solely because in this world of ours, *wealth is the only convenient measure of the strength, or intensity of human motives.* Other motives like love, friendship, family affection, charity, etc., too, exert their influence. But the fact is that the steadiest and the most important motive behind economic activity is the desire to get a money income.

It is possible to conceive of a world where this motive is eliminated, where new values have been substituted for the old and where social service is given a greater recognition than wealth. Some badge or symbol, say a title like Rai Sahib, Khan Sahib, or Sardar Sahib in different gradations takes the place of money. In that case Economics will take no notice of money. The science of Economics will still be there although wealth in its conventional form will have ceased to exist. It is, therefore, merely an accident of this age, where wealth undeniably happens to play an important part, that Economics and wealth are connected, otherwise the aim of economic study is human welfare.

There is another reason why Economics studies wealth rather than welfare. *Notions of welfare vary from individual to individual.* Everybody seems to have his own conception of what welfare consists in. Some would have us promote physical well-being, others moral uplift or still others spiritual well-being. Some see the emancipation of mankind in intellectual perfection. Moreover, ideas of welfare have varied from age to age and from country to country. No scientific treatise can obviously be built up on such an ephemeral, shifting and varied notion. Rather than catch this will o' the wisp, Economics builds itself upon a solid foundation of wealth, about the nature of which there is almost a complete unanimity.

There is in some cases a *divergence between wealth and welfare.* Air and sunshine which are indispensable for life, and so for human welfare, are not regarded as wealth at all. Again joy, love, friendship, health culture, etc., which are of immense value in life and make it worth living, stand outside the pale of wealth. Those things, therefore, which are highly conducive to human well-being find no place in wealth, from which it may be concluded that wealth ignores welfare.

Look at the other side. *Several things included in wealth not only do not contribute to our material well-being but are, on the contrary, detrimental to it.* Narcotic drugs, pernicious books and several other evil things and services which are regarded as wealth by the economist must seriously and adversely affect our welfare. They pull man down rather than lift him up in any respect.

Further, a *wealthy society is not necessarily a high society in the real sense of the word*. Rather in these days of stark materialism the rich class seems to monopolise all the depravity one finds in the whole society. Wealth corrupts, misleads and poisons the human soul. All morality and scruples are thrown to the winds. The rich seem to have lost their moral bearings. There are people who seriously believe that it is easier for a camel to pass through the eye of a needle than for a rich man to enter Heaven. Wealth is a good servant but a bad master.* Wisdom and humanity are needed to control it. In their absence, the man of wealth runs amok, literally and metaphorically, and one exclaims that there can be no earthly connection between wealth and welfare. They are poles apart.

But this is not so. We have perhaps painted wealth in rather unduly dark colours. Where we have mentioned its corrupting influences, we must also recognise its potentiality for doing good. All depends on the way it is used. A man of wealth can undoubtedly help himself and his family in maintaining a good standard of living and thus promote his material welfare. He can have a healthy, honest and self-respecting life. He can give good education to his children and set them on the path both of virtue and material prosperity. But what is even more important he can help his less fortunate fellowmen, relieve their misery and make them forget the sting of squalor and poverty. Men like Sir Ganga Ram in the Punjab made money with all possible zest and then put it to the service of humanity. Only a rich man can help himself and help others. Who can deny that *wealth has great potentiality for promoting welfare*?

The statesman actively believes in the potency of wealth for good. He sees to it, that no stigma attaches to it while wealth is being produced. The greed of the factory owner is curbed by the stringent factory legislation, which ensures healthy surroundings to those who are engaged in production.

In modern times emphasis has been shifted from production to distribution, for it is believed that it is not merely on total wealth that the welfare of the community depends but on its equitable distribution. All the post-war economic plans in India and elsewhere have laid a due emphasis on the proper distribution of wealth in the community. Minimum wage systems have been instituted, laws have been passed against usury, attempts have been made to limit profits all with a view to ensuring that wealth is made to yield the highest possible dividends in the form of human welfare. Just see the modern tendencies in public finance—steeply progressive taxation of the rich and provision of greater and greater amenities for the poor in the form of better medical aid, better education, better roads and other means of social good, e.g., public parks, museums, libraries, etc. All such attempts are an open recognition of the fact that wealth is a powerful, and according to some, the only effective instrument of promoting human welfare. The relation between wealth and welfare is one of the closest.

CHAPTER III

CONSUMPTION

1. What is Consumption ? In the department of consumption we discuss how the limited resources of the community are utilised for the satisfaction of the unlimited number of human wants or how the community adjusts its resources to its requirements. This seems to be the most important economic problem. In the words of Ely, "*consumption in its broadest sense, means the use of economic goods and personal services in the satisfaction of human wants.*" A person who uses a commodity or makes use of a service is said to consume wealth.

Just as man cannot create matter and can only give it utility by changing its form, in the same manner man cannot consume matter. He can simply *derange it* by using up its utility. Consumption has, therefore, been also defined as *destruction of utilities*. The destruction may be immediate and instantaneous, as in the case of the meal that you take or the water that you drink ; or destruction may be gradual and may be spread over months or even years, as in the case of durable commodities like furniture, houses, bicycles, motor cars, etc.

But it needs emphasising that *consumption does not consist in mere destruction as such*. The house may catch fire, the tea-set thrown down from the table, the master angry with the servant, may throw the meal at his face. The things are destroyed all right but no satisfaction has been rendered. Such acts will not come under consumption, for consumption means getting satisfaction by use.

Also, it is not necessary that the value or utility of the article must be destroyed or diminished by use. It is supposed that Persian carpets and diamonds improve by use. But even in these cases they are surely, though slowly, very slowly, indeed, moving towards their end.

Consumption is sometimes classified as *productive consumption* and *unproductive consumption*. When I use paper to write a letter, it is a case of unproductive consumption, but when the publisher of a book uses it, it is productive consumption. The use of producer's goods is productive consumption and that of the consumer's goods is considered to be unproductive consumption. But in a real and broader sense the use of consumer's goods is highly productive, for without their use work of production cannot go on.

2. Importance of Consumption. For a long time the economist's attention was focussed mainly on production of wealth. But now consumption has received its due recognition, and is attached a great importance. It is now clearly realised and duly emphasised

that it is consumption which gives production an initial push. Desire to consume things is the mainspring of all economic activity. "Sluggish consumers sluggish business," is the maxim. It is the consumers who issue a directive, as it were, for the production of some articles and the cessation of production of others. We shall discuss the theory of the sovereignty of the consumer a little later. We may mention here that the volume and direction of productive activity is determined by the consumers' desires for goods and services.

[Standard of living in a community is indicated by the nature of consumption obtaining there] The wholesomeness or otherwise of consumption will determine productive efficiency. Unplanned or unwise consumption is the greatest cause of inefficiency of industrial workers in certain countries. Wasting money on drink, unbalanced diet, extravagant expenditure on social ceremonies and too little on education and health are responsible, in no small measure, for the comparative inefficiency of Indian workers. Prudent consumption is as much our need as efficient production and equitable distribution. A fair distribution of wealth without consumption being set on the right lines will defeat its very purpose.

3. Wants, Needs, Desires and Demands. Before we take up the analysis of human wants and study the laws governing their satisfaction, it is necessary to distinguish clearly between the words "want," "need," "desire," and "demand."

"Wants" are physiological. A man feels hungry or thirsty and he wants a meal or a glass of water. He experiences what is opposite of satisfaction. Wants relate to our primitive nature and we have them in common with animals.

"Need" implies not what the person concerned feels the absence of but what is determined by an outsider, from an objective point of view. We say the boy needs exercise to tone up his health, even if he does not feel about it. Want is what he feels, need is what we decide to be useful and necessary for him; it is externally determined.

"Desire" is more psychological than physiological, just as the want is, but it does not refer to our primitive nature. Instinct plays less part in determining what we desire, whereas wants are more or less instinctive. We desire fame, power, influence, and not merely food and drink. Desire is related to an object, which you wish to realise. When "want" indicates a particular commodity or service as its object, it may be called desire. Want is somewhat vague, 'desire' acquires definiteness.

"Demand" is different from desire. "Want" or "desire" is a mere craving or longing. It indicates an expectation of satisfaction and not satisfaction actually realised, as in the case of utility. [For the satisfaction of desire an effort is needed. When the person who desires has decided to make the necessary sacrifice to obtain the object of desires, it becomes demand.] A beggar may desire to ride a Rolls

Royce or to live in a palace. Money is needed to translate these desires into reality. A miser also may want these things, but has not the heart to spend the money. The former lacks the ability and the latter the willingness to pay money and in both cases, the desire remains an idle dream. When desire is backed by willingness and ability to pay, it becomes demand or effective demand.

One may want a motor car, but if he is actually trying to get a bicycle, that is what will matter. When we said that consumers direct economic activity, we meant to say that it is not the consumers' desires that do it, but their demand. Nobody is going to take notice of a beggar's or a miser's desire. Economic goods are meant not for those who desire things, but for those who command the means for obtaining them and are willing to part with those means.

4. Origin of Wants. How do the wants arise? In the first place, in common with animals, we have our elementary wants to satisfy. We must have a minimum amount of food and clothing and a certain type of shelter against the inclemencies of weather. Without these things, it will be impossible to preserve and perpetuate human race. These are the bare physiological needs which demand urgent fulfilment. Craving for food and drink, desire for a minimum cover for the body and the need for shelter against heat and cold are our natural needs.

Secondly, wants arise, not because we have to meet the needs of our body, but of the spirit. Man will not be man if he would rest content with fulfilment of the bare necessities of life. As soon as he is supplied the minimum necessities of life, he begins craving for better things. Element of ostentation enters into his wants. He wants to show off. He wants to make a display of his superiority. In order to distinguish himself from the common multitude, he must have ostentatious dining arrangement, a showy dress and an attractive house. Desire for show starts an endless series of wants.

Thirdly, aesthetic tastes and altruistic motives constitute another spring for the rise of human wants. A man must satisfy his sense of beauty and desire for refinement. He must also desire certain things, though not for himself but for the benefit of his fellow beings. These are his cravings as a moral being.

Finally, there are wants felt not as individuals but as a group. In the above three cases, wants are felt by man as an individual. But man is a social animal. He will certainly want certain things to maintain his status in his group. These are called conventional needs. As a member of society man is expected to dress himself in a certain manner, to live in a certain quarter and to meet other social obligations. Many of the human wants can be traced to this cause.

5. Characteristics of Wants. "The life-history of a normal human being is the record of a continuous sense of incompleteness."

We are always wanting one thing or another. It is a race towards Eldorado. We are never completely contented. It is the pursuit of a mirage. Some people see in this "dire discontent" the root cause of all human progress and something which wise Providence has ordained, so that springs of human joy and enthusiasm may not get dried up. "Aspiration is a joy for ever", says Stevenson. Human wants constitute one of the basic facts of economic life. A careful analysis of wants reveals some very important characteristics.

(i) *Wants are unlimited in number.* Human wants are innumerable. A savage has only a few wants. A civilized person can never hope to complete a list of all his wants. A few of our wants lie in our conscious mind, but the great majority are to be found in our sub-conscious mind lying in layers, as it were, one below the other. When the top layer of wants is finished, the wants next in urgency take their place and this continues interminably, so that we never can possibly hope to reach the end of our wants. We are now in a much better position to satisfy our wants than our primitive ancestors. But wants, too, have multiplied. When we satisfy any of our wants, the satisfaction is transient and another want crops up and takes its place. Familiarity blunts the edge of our recurring wants and our mind turns to newer and newer wants. We have already noticed that multiplicity of wants in relation to scarcity of means is responsible for the existence of all our economic problems.

(ii) *Satiableness of a Particular Want.* Although all wants put together can never be satisfied in their entirety, yet the satisfaction of each particular want is within the range of possibility, assuming that the would-be consumer has the means to pay for the commodity or service that he wants. Even here we can think of certain wants which can never be completely satisfied. Desire for ideal health, fame and spiritual salvation must remain in the realm of dream-land. The satiable characteristic of human wants lies at the basis of the Law of Diminishing Marginal Utility. Because each want is satiable, the satisfaction that we derive goes on diminishing progressively as consumption proceeds.

This has been named the First Law of Gossen, after a German writer of that name who stated it thus: "The amount of one and the same satisfaction declines, as we proceed with that satisfaction, until satiety is reached". The importance of this Law does not lie in the satisfaction of a particular want as in the fact that when one want is satisfied, other wants claim our attention.

(iii) *Wants are Complementary.* This means that the satisfaction of a particular want does not stand isolated. To satisfy one want fully, we want several things together. Horse and carriage, eye-glass and the frame, fountain pen and ink, etc., are wanted together. As a matter of fact, it is very seldom that there is a demand for an isolated object. Everything is wanted as a part of

system of demands. *We want things in group.* Wants are mutually related. This characteristic of wants has an important bearing on the theory of interrelated values. If demand for one thing increases, it leads to a corresponding increase in the demand for other things, which belong to the same group.

(iv) *Wants are Competitive.* This fact arises from the scarcity of means in relation to wants. Our wants are unlimited but the means at our disposal for their satisfaction are limited. We are compelled therefore to choose. There is a large variety of wants that we experience. We cannot satisfy them all. They compete against one another to secure our choice. There is thus going on, every minute, an ever-recurring conflict and competition between several things that we can do. We can go to a coffee house, a cinema show, a sports meet, or witness a wrestling match between wrestlers of repute, or buy a necessary book. There is quite a large number of alternatives before us to choose from at any given time. There are conflicting claims on our purse, time and energy, the fund of each of which is strictly limited. There is, therefore, a regular competition between our wants. This gives rise to a law known as the Law of Substitution which we shall discuss later.

(v) *Some Wants are Alternative.* This is the case when for the satisfaction of a particular want different alternatives are open to us. We want a drink, we can have tea, coffee or cocoa or if it is summer, we can have *sharbat*, *lassi*, soda, lemon squash, orange squash, etc.

These are so many substitutes. But not many alternatives are acceptable when we want to satisfy our elementary needs of hunger and thirst, because we are used to satisfying them in a particular manner. In the higher ranges of wants, however, there is much greater diversity of choice.

These characteristic wants may be distinguished from that mentioned above, viz., that wants are competitive. In that case there is a choice between the wants themselves. We have to choose which want to satisfy. But once we have selected a want different alternatives are open to us for the satisfaction of that particular want. Therefore wants are both competitive and alternative.

(vi) *Wants Recur.* In several cases the satisfaction of a want does not finish it for good. It recurs sometimes regularly, so that we have to satisfy it again in the future. [Repeated satisfaction changes it into habit and it is in this way that our standard of living is evolved and built up.] As man goes up from savagery to civilisation, the number of recurring wants goes on multiplying and he has continuously to work for the maintenance of the standard of living to which he has become accustomed. This has an important bearing on the determination of wages as we shall see.

Recurring wants have inelastic demand.

(vii) *The Unconscious Wants.* The wants may be conscious or unconscious. We are not conscious of all our wants. All wants are not felt by us. Some wants are dormant and lie in the unconscious

summer and a heater in winter or thickly cushioned chairs or beds or keeping a number of servants. No doubt these things, too, add to personal efficiency, but not in proportion to the expenditure incurred. A continuously comfortable life makes people "soft", lowers vitality, makes them less fit to face the rigours of life, renders them more susceptible to illness even on a slight departure from their accustomed mode of living.

(c) "*Luxuries*" may either refer to harmful consumption or simply to one's living beyond one's means although the commodities that he is using may not only be not harmful but positively beneficial. Ely defines luxury as excessive personal consumption. "Luxury in its ordinary sense means", he says, "anything that satisfies a superfluous want."

A Defence of Luxuries. Luxury in our minds is associated with bad consumption. But there are people who support the use of luxuries. It is said that luxuries are a provision against the rainy day, e.g., ornaments and jewellery will stand in good stead at the time of adversity.

Further, desire for the enjoyment of luxuries applies a strong spur to human activities and people work harder and better; it is an incentive to economic progress.

It is pointed out that use of luxury articles improves one's taste, makes one refined and cultured and lends colour to life, making it richer and fuller. It is, therefore, suggested that every one, even the worker, should have at least some luxury in his scale of consumption.

Luxuries are also advocated for their educational influence on one's character. They are justified sometimes on the ground that everybody has got the right to use his income in any manner he likes.

It is contended that expenditure on luxuries by the rich provides employment for the workers. But this is not a sound argument. A man may have a right to use his income as he likes, but he cannot escape social disapproval for anti-social and morally bad behaviour. As for creating work, it may be pointed out that the same expenditure may be made to provide more work, better work and also benefit the society. Instead of building a luxurious palace, if one builds a factory, permanent employment will be created and goods produced will benefit the society at large.

On the whole, expenditure on luxuries is not commendable.

But "luxuries", "necessaries" and "comforts" are relative terms. They are relative to place, time or person. No *pucca* label can be put on a commodity or brand it as luxury or necessary. The same thing may be luxury for one person and necessary for another. A motor car is a luxury to a *Rais* living in a place of short distances, especially if he is not pursuing any ostensible vocation and is simply living on his wealth. But to a doctor, to

a busy professional man, to a minister or a high official, car is a necessity. Examples can easily be multiplied.

7. Standard of Living. Necessaries, comforts and luxuries, to the use of which one may be accustomed, go to make up one's standard of living. This standard is the outcome of varied influences. We partly inherit our standard of living from our parents and then we shape it according to our own tastes, education, experience, social environments and our instinct of imitation and cancellation. It is gradually, almost imperceptibly, built up and can also be only gradually modified or lowered. That is why any diminution in one's income is likely to cause a lot of privation and hardship. We have all experienced this hardship during the war, when our standard of living has received a frontal attack. It is not easy to be adaptable in these matters.

The standard of living in a country depends on the variety and volume of production. It cannot be maintained on foreign loans or foreign charity. Our own production will form the basis of our living as Benham remarks : "Manna no longer falls from Heaven."

We may mention four conditions on which the standard of living depends :—

(1) No economic resources, which are willing to work, must stand idle ;

(2) The available economic resources must be set to work to produce in the greatest quantities those products which consumers most desire ;

(3) The income of the community must be distributed among individuals in such a way that the greatest possible satisfaction is obtained from the limited national income.

(4) The standard of living will not be the highest possible unless a proper balance between work and leisure is maintained and unless the total population and the total stock of capital are forthcoming in the most appropriate amounts.

Standard of living is sometimes distinguished from standard of life and scale of living. Standard of living refers to food, clothing, housing accommodation, etc., to which a person is accustomed and standard of life refers to his ideals in life. An Indian mystic may have a low standard of living, but a high standard of life. Standard of living tells us about the things that one would like to have but the scale of living what he actually possesses.

8. Engel's Law of Consumption. Before we conclude this discussion, it may not be out of place to refer to a law called the Engel's Law of Consumption which is based on a study of the standard of living or the family budgets of a number of families. Earnest Engel was the head of the Prussian Statistical Bureau and by a systematic study of family budgets, he came to the following broad conclusions as to the manner in which a family distributes its income over the various items included in its standard of living :—

(1) As income increases the percentage expenditure on food and other necessities of life decreases and *vice versa*.

(2) The percentage expenditure on luxuries and on other cultural and recreational wants increases with an increase in income and decreases when income decreases. It almost vanishes in the case of low incomes.

(3) As for lodging or rent, fuel and light percentage expenditure is invariably the same for all incomes.

(4) Whatever the income, percentage outlay on clothing is practically the same.

It is to be carefully noticed that it is the percentage expenditure, and not total expenditure, which increases or decreases. As a person's income increases from Rs. 100 p.m. to Rs. 500 p.m. his expenditure on food increases, say, from Rs. 50 to Rs. 125, but the percentage expenditure decreases from 50 to 25.

In our own country intensive inquiries have been made into family expenditure. Harold Mann made some inquiries in the Deccan, and the Punjab Board of Economic Inquiry also has made extensive inquiries of this nature. All such inquiries have borne out the truth of the rules discussed by Engel in about the middle of the last century.

CHAPTER IV

CONSUMPTION (*contd.*)

Law of Diminishing Utility

1. Introduction. We have studied the meaning of the term utility in Chapter II. Utility means want-satisfying quality of a commodity. We have also seen that utility is subjective and varies from individual to individual. Utility is not the same thing as satisfaction, nor is the term Utility synonymous with usefulness. It has no ethical significance. We shall now study a very important law in consumption that governs utility, *viz.*, Law of Diminishing Marginal Utility.

2. The Law of Diminishing Marginal Utility. When we discussed the stability of a particular want, we noticed a law called the First Law of Gossen. This law has now been refined and elaborated and appears as the Law of Diminishing Marginal Utility.

The law refers to common experience of every consumer. Suppose a person starts eating apples one after the other. The first gives him great pleasure. By the time he starts taking the second one the edge of his appetite has been blunted, and the second apple, meeting with a less urgent want, yields less satisfaction; the satisfaction of the third will be less than that of the second, that of the fourth less than that of the third, and so on. The satisfaction will go on decreasing with every successive apple till it drops down to zero and if he is forced to take more the satisfaction may become negative or utility may change into disutility.

The idea will be clear from the following table :—

1 Units (Apples)	2 <i>Total Utility :</i> Units of Satisfaction	3 <i>Marginal Utility :</i> Units of Satisfaction
1	20	20
2	38	18
3	53	15
4	64	11
5	70	6
6	70	0
7	62	-8
8	46	-16

N.B. These figures are merely illustrative representations of the amount of utility. Any other figures could be taken, provided variations in the amount of utility are similar as in the table given above.

When our hypothetical consumer goes on taking apples, the extra satisfaction that he gets by the consumption of each successive

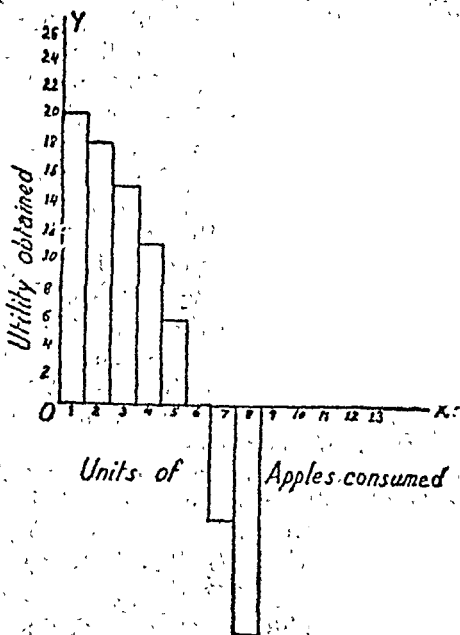
apple goes on decreasing till it goes down to zero at the 5th and then it becomes negative (see column 3). The total utility goes on increasing until the consumption of the 5th ; but, it is worth noting, it increases at a diminishing rate. It is obvious, therefore, as the consumption of a commodity proceeds, the succeeding units are not so welcome as the preceding ones. We do not want to have more of the commodity or, what comes to the same thing, we want less of it. In the words of Chapman, "The more we have of a thing the less we want additional increments of it, or the more we want not to have additional increments of it." Marshall sums up the Law thus :—

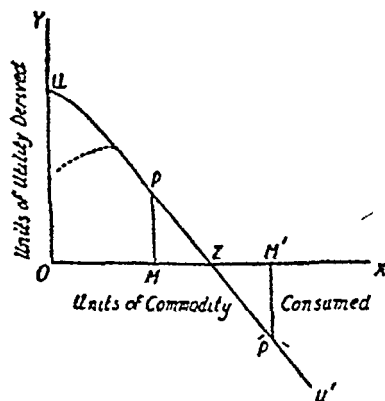
"The additional benefit which a person derives from a given increase of his stock of a thing diminishes with every increase in the stock that he already has." We might add that with every diminution of his stock, the marginal utility will go on increasing. In other words, the utility varies inversely with the stock, although not necessarily in the same proportion.

3. Diagrammatic Representation. The following diagram illustrates the Law of Diminishing Utility as applied to the consumption of apples (See the table given above).

From a point O, OX and OY are drawn, the former horizontal and the latter vertical. These are known as the axis of X and the axis of Y, respectively. Units of apples are measured along OX and units of utility along OY. Utility derived from the consumption of the first apple is represented by the rectangle, standing on the portion of the axis of X indicated by Figure 1. Similarly, the utility of each successive unit consumed is represented by the rectangles as shown in the diagram. These rectangles get smaller and smaller, as consumption of apples proceeds. The sixth apple yields no utility. The seventh and eighth yield negative utilities, as shown by rectangles below the axis of X.

The apples are big units. If a commodity is consumed in sufficiently small units, the rectangles would become thinner and thinner, until you can theoretically assume that they become so thin as to be represented by just a line. Now, if the tops of such lines, standing shoulder to shoulder, are joined together, we get a curve sloping from left to right, as shown in fig. 2. We may substitute any commodity for apples to make the law of general application.





If from any point P on the curve, PM is drawn perpendicular to OX , PM will be the marginal utility of OM quantity consumed. If consumption is carried to OM' , the marginal utility becomes negative, i.e., $P'M'$. When consumption is OZ , marginal utility is zero.

We have assumed that the law begins to operate after the first unit of consumption, as in our illustration of apples. But it is quite possible that up to a point marginal utility may rise. This can be re-

presented by the curve first rising to the right, and then falling. This is indicated by the dotted line.

4. Assumptions and Limitations of the Law of Diminishing Utility. The Law of Diminishing Utility as enunciated above is based on certain assumptions and will not hold good in their absence.

(i) It is assumed that the commodity is taken in suitable and reasonable units. If you begin taking water by the spoonfuls when thirsty or if you want to judge the utility of morsels rather than the full chapatis, then your thirst or hunger will be first stimulated rather than assuaged and the utility may, at first, rise instead of falling. But, sooner or later, a point will be reached when utility will begin to diminish.

(ii) It is further assumed that the commodity is taken within a certain time, for otherwise if you take your meal at 10 a.m. and the next at 2.0 p.m., there is no reason why the utility of the second meal may be less. But in case another meal is offered to you within an hour of your having taken the first, the law will apply and the utility of the second meal will be less.

(iii) Another assumption is that the character of the consumer does not change. More music one hears, more literature one reads, more wine a drunkard takes, more money a miser has, in each case the increase in commodity means increase in utility. This is so because the character of the consumer has undergone a change. He is different from what he was at the start so that the commodity has a stronger appeal. More reading lifts a person to a higher plane and he is able to appreciate and enjoy literature better than he could before. That's why it is said that the law does not apply to non-material satisfactions.

(iv) The income of the consumer should remain the same. Any change in income will falsify the law. A rise in a man's income may

raise in his eyes the value of various plots in his big compound of which he could not make much use before on account of his limited means. The marginal utility of the income as a whole may increase with increase of income.

(v) In the case of rare collections, the law will not hold. If a man is collecting ancient coins, the more he is able to collect greater will be his satisfaction from the additions to his stock.

(vi) There is another exception. The law says that the utility decreases when there is an increase in our stock. But in some cases utility changes not because of a change in what we have, but from a change in other people's stock. For example, if I have a rival in the town collecting ancient coins and somehow he loses his collection the utility of my collection automatically goes up. In the same manner utility to me of my telephone increases as the number of connections increases. The value of my land goes up without any change in its dimensions when a railway station has been built nearby.

(vii) The utility also depends on our other possessions. The carriage may be lying useless with us, but as soon as we are able to buy a horse, its utility at once goes up.

(viii) Utility also depends on the change of fashion. The utility of my dress goes up when that dress comes in fashion. If, on the other hand, it goes out of fashion, utility goes down, in spite of the fact that there has been no increase in my stock.

The Law of Diminishing Utility, like other economic laws, is a statement of a tendency. It simply tells us that the utility is likely to decrease but whether it actually decreases or not will depend upon so many circumstances. If the conditions are not fulfilled, the law does not apply as in so many exceptional cases mentioned above.

5. The Law is Independent of Quality. It is well to remember that the Law of Diminishing Utility does not operate because the successive units of the commodity are inferior. It has nothing to do with the quality of the units, although it is understandable that if a unit is of inferior quality *ipso facto* its utility will go down. But the law enunciated above is far more fundamental and universal and is independent of quality. The apples may be all of uniform quality and exactly interchangeable, still the additional utility will decrease as consumption proceeds without any defect in the apple itself. The units being of the same quality, it is wrong to say that each successive unit has a different utility. Only the additional utility that we get by the consumption of an extra unit is different. A unit makes a smaller addition to our utility solely because it happens to be consumed later.

6. The Law is Independent of Choice. The additional utility of each successive apple falls not because our eye is set on the glass of fruit juice on the table and that we would like to change over. The law will apply all the same even if there is nothing else

before us except apples. It is a psychological phenomenon. We must, sooner or later, get fed up with a commodity irrespective of the fact whether any other choice is open to us.

7. Some Other Implications of the Law. Transferred from the world of theory to that of fact, the law simply means that *more urgent wants are satisfied first*. As the stock increases, it will be put to less and less urgent uses and the curtailment would mean the reversing of the process. Water will be first used for drinking, next for bathing and washing and then for sprinkling on the road. The supply will determine the actual use or uses. In the event of a decrease in the supply the least urgent uses will be sacrificed first. Universality of such a proposition is self-evident.

The law holds good in all types of satisfaction whether good or bad. *We do not assume rationality on the part of the consumer.* Nor do we assume that there is a rigidly fixed order in which wants are arranged by all, although the order will roughly correspond within the same class of people.

Also, utility of no commodity in the world is absolute and unconnected. It is related to the utility of other things. When the utility of a particular commodity falls with an increase in its stock, it falls relatively to the utilities of other commodities. As more of our limited resources are expended on one thing, less will be spent on some other things. Therefore the utility of this particular thing will fall, whereas the utility of other things will go up. In the actual world, where we are concerned with that adjustment of means to ends, we are continuously comparing relative utilities of different commodities and services, and how much we decide to buy of one commodity will depend upon its price and the prices of possible substitutes.

8. Some Objections Against the Law. It is objected that the whole discussion of the law is unreal. In the world of reality commodities are not consumed in successive units as the law assumes. When you are thirsty, you just take a glass of water and there is no occasion to watch the waning of utility. There are certain things which are indivisible into units, e.g., a bicycle, a house, a book, etc. The objection can be met by pointing out that most of the consumable articles are purchased in suitable quantities successively per week, per month or per year to conform with the periodical inflow of our own income. But the purchase of a house which is perhaps the first and the last may be conceived of as so much per month (say Rs. 25 if it saves you that much rent). The marginal utilities of such durable goods can be measured by our sense of loss if they disappear.

It is further said that the utility doctrine is based on unsound psychological principles. But the fact is that the Law is based on experience rather than any abstract psychological principles.

9. Marginal Utility. Where is the end or margin of a man's purchase? When a man is purchasing a commodity, he is consciously or unconsciously weighing in his mind the price he has to pay and the utility of each unit. He will continue purchasing till the utility equals the price. Take the following table :—

Apples	Marginal utility (units) <i>annas</i>	Total utility (units)
1	10	10
2	8	18
3	6	24
4	4	28
5	2	30
6	1	31
7	0	31

Where will our consumer stop? It depends upon the price. If the price is 4 as. per apple, then he will stop at the 4th, for there the utility will be equal to the price (marginal utility being represented in anna units). If the price is one anna per apple, he will go up to the 6th and if they are free, then he will go on consuming till the additional utility comes down to zero. He will not go beyond this point because disutility will be the result. *He stops at a point where the price and the utility are just equal.* This is called the marginal purchase and the extra utility obtained at this point is called the marginal utility. It is a point where we consider just worth our while to purchase for here the discomfort of parting with the money and the benefit derived from the purchase of the commodity just balance. *Marginal utility has also been defined as the addition made to the total utility by the consumption of the last unit just considered worth while.* Thus if we buy 5 apples the 5th is the marginal apple. But marginal utility is not the utility of the 5th apple, because all the apples are alike; but it means how much has been added to the previous total by the consumption of this particular apple.

In this case all the apples are taken to be of uniform quality. But if they are not, then the apple which we are just induced to buy, considering the price, is the apple of *marginal quality*. When a thing can be put to a variety of uses, that use to which it is just worth while to put it, considering the price, is called the *marginal use* or the *marginal want*. It is the least important use under the circumstances. If the price had gone up, this use or want would have been sacrificed. Different consumers have different means and the one who is on the margin of doubt whether to buy or to go without and who is just induced to buy at the current price, is called the *marginal consumer* or *marginal purchaser*. He would not have purchased if the price had been a bit higher.

The margin is not something rigid or fixed. It shifts forward and backward according to price. If the price falls, margin will descend and *vice versa*.

10. Marginal Utility and Price. It is clear from the above discussion that marginal utility and price coincide or price measures marginal utility. The consumer stops where the price and the utility are equal and this point is the point of marginal utility. All units of the commodity being interchangeable what is paid for the marginal unit is paid for every other unit. Therefore, we can say marginal utility determines price.

11. Social Marginal Utility. But whose marginal utility determines price? Marginal utility is subjective and is different with different individuals, whereas there is one price prevailing in the market. The marginal utility which determines price in the market is not the utility of any particular individual but, a sort of *average of all individuals in the community* and may be called the *social marginal utility*. It is marginal utility to the society as a whole. It is supposed that when large numbers in the aggregate are concerned the individual angularities are marked off. Market prices, therefore, do not represent the marginal utilities of all buyers owing to their different incomes and circumstances.

It follows, therefore, that the rich man buying the commodity at the same price is making a much less sacrifice than the poor, because marginal utility of money to the rich is less than that to the poor, *the difference in the circumstances of each consumer is reflected not in different prices but in different quantities purchased.*

12. Marginal Utility and Supply. Marginal utility is a function of supply, i.e., it varies with supply. In the case of a free good where the supply is unlimited, one can have as much of it as one likes. The marginal utility is zero. Only in the case of scarce goods the marginal utility is positive. It increases as the supply contracts and decreases as it expands, and comes down to zero when the supply is in superabundance. In the latter case, we have to pay nothing and marginal utility is also zero. This scarcity in relation to demand determines prices and price measures marginal utility. Therefore marginal utility will depend on supply in relation to demand. It is a function of supply.

13. Relative Marginal Utility. Marginal utility of one thing is not independent of the marginal utility of other things. When we are considering whether to buy a little more of one thing or a little less of another, we also compare, consciously or unconsciously, the marginal utility of say fruits on which money could be spent or of anything else that we could buy. Similarly, a manufacturer always compares the marginal utility of say an extra labourer with that of a machine and so on. Such comparisons are constantly going on in our minds and thus the marginal utility of a commodity has always reference to the marginal utilities of other commodities. We have not to consider marginal utility in the absolute sense.

When we stop purchasing or consuming a commodity i.e. when we have reached the margin, the decision is made not exclusively with reference to that particular commodity but with reference also

to several other commodities which we could purchase. Although the Law of Diminishing Marginal Utility will apply even if there were only one commodity in existence and there were no choice, yet the fact is that, there is a choice. There are so many other commodities that we can purchase and the marginal utility of one commodity cannot remain unaffected by that of another. We stop buying mangoes because we would like to purchase some plums too and we stop buying plums so that we may also have a few oranges. Thus the marginal utilities of all these three commodities become interdependent. Marginal utility of one commodity comes to be related to another. In short, marginal utility is relative.

14 Marginal Utility of Money. Does the conception of the margin apply to money? It is said that there can be a limit to the purchase of a commodity, but no such limit can be conceived of in the acquisition of money, which means all commodities in general because money is a general purchasing power. In the case of all the commodities taken together there can be no margin, for you will always want this or that commodity. You can never reach a stage where money ceases to be desired.

It is further pointed out that whereas it is possible to have some idea of the comparative satisfaction of an individual derived from different commodities, you cannot compare the satisfactions of the two persons from the same commodity, because as Chapman says, "there is no bridge to connect the utility enjoyed by one person with the utility enjoyed by another."

Hence the same quantity of money has different significance to people with widely different means.

We may concede the strength of this argument. But it is also true that the Law of Diminishing Utility certainly applies to money too. As money increases its significance to the owner decreases. The rich man attaches much less importance to each unit of money. He spends it more freely and is much less worried in case he happens to lose a certain portion of it. Every increment in the amount of money that a man has brings him less and less extra pleasure. Marginal utility of money is measured by the utility that we shall lose by the loss of a small sum of money.

15. Practical Importance of the Law of Diminishing Marginal Utility. We have seen that the law of diminishing marginal utility applies to money too. This forms the basis of the theory and practice of taxation. A progressive system of taxation imposing a heavier burden on the rich people is a practical application of the principle in the field of public finance.

In actual life our attention is always focussed on the margin. We seldom think of the total utility. We are always weighing the profitability of buying a little more or a little less of a thing and we think whether, instead, we should buy a little more or less of something else. It is through the margin that the law of substitution works and we are able to arrange our expenditure in such a manner

as to give us the maximum satisfaction. The margin helps us in the utilization of scarce means for the satisfaction of our multiple wants. It determines which wants must be sacrificed and which satisfied. It enables us to make choices and thus to make the best use of our limited resources. As such its practical importance both to the general consumer and the business man can hardly be exaggerated.

The Law explains why demand curves slope downwards. It also explains the divergence between value-in-use and value-in-exchange.

16. Utility of Substitutes and Complements. On the assumption that all things are independent in value, we should arrive at a total of utilities which will not at all accord with facts. Values are in fact interdependent and are mutually influenced, as is the case with substitutes and complements. If there were no coffee, the utility of tea would have been much greater than it actually is now, because there is coffee to fall back upon. Thus the total utility of both tea and coffee now is much less than it otherwise would have been. Take an extreme case, of shoes. If you lost the right foot, the left would be of no value to you. Thus the value of each complement in the absence of the other is nil. You will, therefore, be prepared to pay for the foot that you have lost a price out of all proportion to its actual value. In case you lost the left foot, then in the same manner you will be prepared to pay more for it than half the total value of the pair. On this basis the total of the utilities of the right and left foot will be much more than it actually is. It is quite clear, therefore, that on account of interdependence of the values of commodities and services, it is well nigh impossible to have an exact idea of their relative utilities.

17. Can Utility be Measured. We have already seen utility is the want-satisfying power of a commodity. But it does not depend on any intrinsic quality of the commodity itself; it rather depends on the attitude of the consumer. A mango possesses inherent qualities to give satisfaction to a consumer. But if somebody is prohibited from taking it under medical advice, for him it possesses no utility. Utility is, in other words, subjective and it varies from individual to individual. It refers to the state of mind of a consumer.

Can we measure a mental state? Obviously, not. We possess no measuring rod by which we can measure the intensity of a person's satisfaction. We have, however, luckily a rough and ready measure in money. Although money cannot exactly measure the satisfaction, yet it can at least help us in comparing intensities of two satisfactions. Suppose I have Rs. 100. I am thinking of buying a bicycle. If I am on the margin of doubt whether I should go in for it or not, and if I am indifferent whether I keep my money or purchase a bicycle, then it is evident that I attach the same importance to the bicycle as to a sum of Rs. 100. In that

case it can be said that to me the utility of the bicycle is equal to Rs. 100. In the same way the utility of a camera may be equal to Rs. 100. This sum Rs. 100 will thus equate the utilities of the bicycle and the camera or of another thing or group of things for which I am prepared to pay the same sum. *Money measures utilities. The utilities of two commodities are in the same ratio as the ratio of their respective market prices.* Actually, our experience and long habit of consuming certain commodities enable us to compare utilities of the two commodities independently of money.

We can measure desire and not satisfaction. There is another point. When I am on the margin of doubt whether to go in for a camera or a bicycle, I am really comparing expected satisfaction as distinguished from realised satisfaction. But we know that anticipated pleasure is generally greater than the actual pleasure realised; at any rate, the two do not coincide. Here again our long experience and fixed habits help us and we can be fairly sure of what the expected satisfaction will be. But it is well to remember that the intensity with which a thing is desired is different from the satisfaction that is actually obtained. There is no means to measure satisfaction but the intensity of desire can be measured by the money offer. The economists generally assume that the two are original.

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CHAPTER V

CONSUMPTION (*Contd.*)

The Law of Equi-Marginal Returns and the Law of Demand

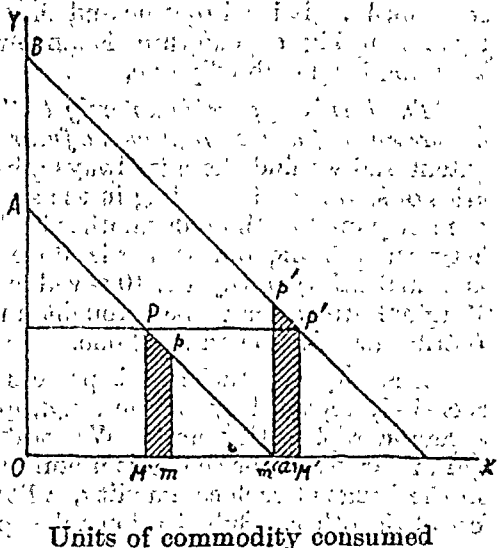
1. **Introduction.** We have seen that wants are both competitive and complementary. Because they are competitive, we have constantly to make a choice between the more urgent and the less urgent wants. In terms of utility, we have to choose between things possessing greater and those possessing less utility. Again, wants being complementary, the utilities of the corresponding commodities must also be interdependent. When we are weighing in our mind whether to buy a little more or a little less of a commodity, we seem to balance the marginal utility of the commodity and that of money. *But what is really balancing is the marginal utility of that particular commodity and marginal utilities of a host of other commodities which could be purchased with that amount of money.* Money thus builds a bridge for us to pass from one commodity to another. This is how substitution takes place. It is not merely a substitution of one thing for another satisfying the same want, e.g., substitution of tea for coffee, but substitution of entirely different commodities, one for the other, made possible through a common money measure.

2. **Statement of the Law.** Every prudent person wants to make the best of his or her resources. This is necessary because resources are scarce in relation to needs—a fundamental proposition with which we started the study of Economics. Every consumer aims at getting the maximum satisfaction possible. For this purpose he will substitute the more useful for the less useful thing. When this process is completed it will be found that marginal utilities in each direction of his purchase are equal. Our consumer is acting consciously or unconsciously on the principle which has been called by various names, the Law of Substitution, or the Law of Indifference, or the Law of Equi-Marginal Returns, or the Law of Economy of Expenditure, or the Law of Maximum Satisfaction. It is called Law of Substitution, because we substitute one thing for another. It is known as Law of Maximum Satisfaction, because through its application we are able to maximise our satisfaction. It is called Law of Equi-Marginal Utility, because it is only when marginal utilities have been equalised through the process of Substitution that we get maximum satisfaction. It makes for economy of expenditure.

This Law is also known as the Second Law of Gossen, and has been stated by Gossen thus: "If it is impossible to gratify all wants to the point of satiety, it is necessary, in order to obtain maximum satisfaction, to discontinue the satisfaction of different wants at the

print at which their intensity has become equal." Every consumer distributes his resources (of money or commodity) over the various uses in such a manner that the marginal utility from every use of the marginal utility of each anna spent on different uses is the same. Only in that manner will the satisfaction be maximised. It is well to remember that it is not possible to equalise total utilities from two different commodities, that being indefinite and immeasurable. We can only equate the utilities at the margin.

The explanation is as follows: After the consumer has spent some of his money on a particular commodity, the marginal utility to him of that commodity begins to fall, until he feels that he would gain more satisfaction by spending additional units of money on something else. He goes on substituting one thing for another (after a point) until the whole of the money he wanted to spend is exhausted. When this is done, he has obtained equi-marginal utility. He cannot now increase his total utility by spending more on one thing and less on the other. If he could do so, he would have done it already. Every rearrangement will mean a great loss than gain in utility, the best arrangement being the one which equates his marginal utility under each head of expenditure.



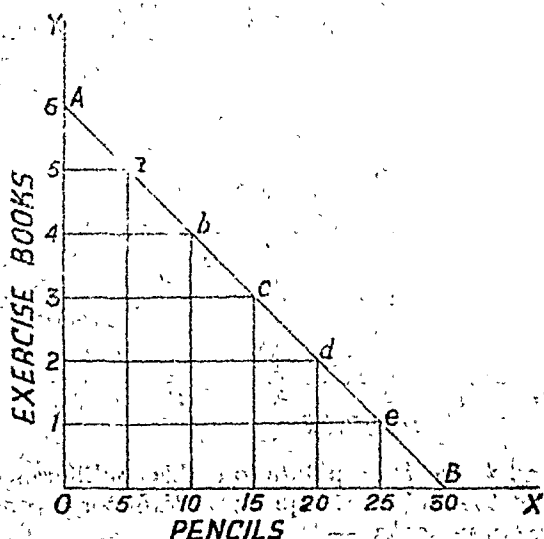
The law can be illustrated by a diagram as above.

Let there be only two commodities, bread and milk, on which money $OM + OM'$ has to be spent. Let A, and B, respectively, be the utility curves of bread and milk. If OM is spent on bread and OM' on milk, the marginal utilities of the commodities (or of the money spent on them) are equal, $PM = P'M'$. The Law of Substitution or Equi-Marginal Utility asserts that this distribution of money achieves maximum total utility, i.e., $OMPA + OM'P'B$ are maximum. If that is so any other distribution should give smaller total utility. Let us see whether this is so.

Suppose (a) stands for a small unit of money. Further suppose that (a) more is spent on bread and (a) less on milk. The marginal utility of milk will rise to $p'm'$ and that of bread will fall to pm . As shown by the shaded areas, the loss of utility will be more than the gain by this new arrangement. Total utility will be less than

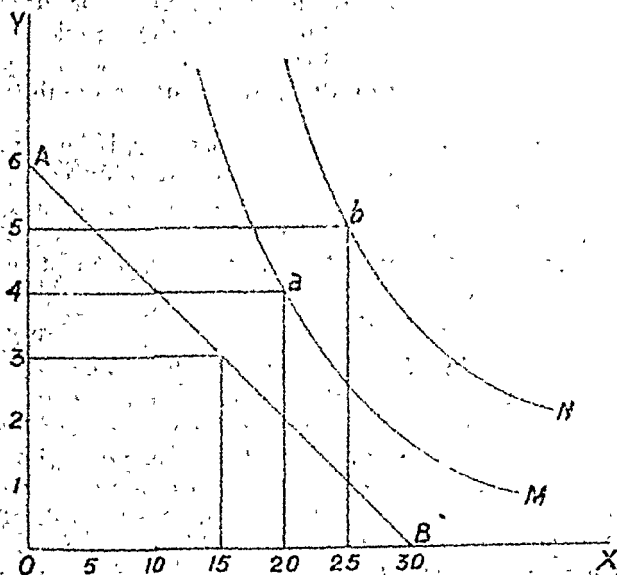
It is at the margin that the substitution takes place. Through this process of substitution he is able to equalise marginal utilities in every direction of his purchase. When marginal utilities have been equalised, further urge for substitution ceases. The consumer will not now gain if he substituted some units of one commodity for some units of the other. He has reached the point of indifference, marginal utilities being equal he is indifferent as to whether he consumes so many units of one commodity or so many units of another. This state of indifference can be represented by an indifference curve.

Suppose boys in a class have only two commodities; pencils and exercise books, and they are free to exchange pencils for exercise books and *vice versa*. Every student has his own scale of preferences. According to this scale there may be several combinations of pencils and exercise books which a particular student may regard as equally satisfactory. He does not prefer one combination to the other. In other words he is indifferent as between these combinations. Such combinations may be represented by an indifference curve as under :



OX and OY are the two axis. Axis of X represents pencils and axis of Y exercise books. We give each boy three exercise books and fifteen pencils to start with. According to their individual scales of preference exchanges will take place among them. A boy will carefully think how many pencils he would be willing to part with in order to get an exercise book. He may state his preferences in a series of combinations of pencils and exercise books, which may be equally satisfactory and as between these combinations he will be indifferent. AB in the above diagram is a line which may be considered an indifference curve of one particular boy. It is made up of a series of points each of which will represent a

both respects. Or a still better combination of five exercise books and twenty-five pencils and so on. Each of these new and better combinations represents a new series altogether and will have to be represented by a new indifference curve. Better the combination, farther to the right and above the previous curve will be the new curve. A number of indifference curves form what is called an 'indifference map', as is shown in the diagram below :—



Curve M represents a preferred position to AB ; for on this curve point *a* gives combination of four exercise books and 20 pencils; The boy is on a new indifference curve. N curve represents a still better position.

4. Marginal Rate of Substitution. How much of one commodity is substituted for how much of another or at what rate do we substitute one commodity for another ? The answer is afforded by the "Marginal Rate of Substitution"—an idea introduced by Dr. Hicks and R. G. Allan. Suppose A has sweets and B has fruit and the two wish to exchange. The ratio of exchange will be the amount of one commodity, sweets that will be given in exchange for the other, fruit. But exchange will only take place if the ratios of marginal utility of the two commodities are different for A and B. Unless the ratios of marginal utilities are different exchange cannot take place. This ratio has been called the Marginal Rate of Substitution. We shall come to this point later on in the chapter on Exchange.

The mathematical-minded economists have introduced another new concept. Elasticity of Substitution corresponding to elasticities of Demand and Supply (to be explained later) in order to estimate the rate at which substitution at the margin is taking place between two commodities. It is pointed out " that an individual can only be in equilibrium with respect to the system of prices in operation

substituting the consumption of less scarce goods for the more scarce ones. The scarcity of the latter is thus relieved and its price comes down. The importance of this law is also shown by the fact that some economists suggest that the Law of Diminishing Utility should be termed the Law of Increasing Marginal Substitution.

Its Application in Distribution. In distribution we are concerned with the determination of the respective shares of the various agents of production, i.e., determination of rent, wages, interest and profit. These shares are determined according to the principle of marginal productivity. Each agent tends to be paid according to its marginal productivity.

The use of each agent of production is pushed by the entrepreneur to the margin of profitableness and the marginal product in each case is the same. In case it is not the same and the marginal product of the two agents is unequal, then the Law of Substitution will come into play to equalise their marginal productivities. This is how the Law of Substitution proves useful in the field of distribution of the national dividend among the various agents of production.

Thus the Law of Substitution has a universal application. It is of fundamental importance in all branches of economic theory. The Law forms the very basis of Economics as conceived by Robbins. Utilisation of scarce means for the satisfaction of multiple ends necessitates the application of this Law. It may be considered *the Law of Economics*; other Laws are its mere corollaries. The Law dominates Consumption, Production, Exchange and Distribution.

6. Does the Law of Substitution Actually Regulate Expenditure? The Law of Substitution involves very careful calculations of the expected satisfaction and its comparison with the amount of money spent as well as with the satisfaction which may be derived by spending the same amount of money in some other directions. We must minutely weigh in our mind the utility of a small additional unit of one commodity with that of another and we must try to balance the two.

But how many of us are capable of such fine calculations? How many of us have the patience and the ability to do it? Are we so rational and calculating? The fact is that most of our expenditure is governed by habit. It is of a routine character and we act on the rule of the thumb. There is not much of conscious calculation and careful weighing of the utilities.

But in the case of extraordinary expenditure or big expenditure a prudent person goes through a certain amount of thinking before the expenditure is incurred and we may take it that it does roughly conform to the Law of Maximum Satisfaction. Even here the marginal utilities may not be exactly equalised.

It is difficult to say whether the actual expenditure incurred by consumers is in conformity with the Law of Substitution or equi-marginal utilities. Economic laws are, after all, statements of

for which we had not bargained. This is the case even in ordinary purchases.

A large measure of consumer's surplus is present especially in the case of things which are very cheap and also useful, e.g., a post card, newspaper, a match box, etc. These things are very cheap and in some cases indispensable too. For them particularly we are always prepared to pay more than their actual price if the alternative is to go without them. From their purchase we get a surplus satisfaction. We have already seen that the prices paid do not reflect the utilities obtained. The total utility is higher than the price paid and we get a surplus, this surplus has been called consumer's surplus.

In the words of Marshall, "*The excess of the price which he would be willing to pay rather than go without the thing over that which he actually does pay is the economic measure of this surplus satisfaction. It may be called Consumer's Surplus.*" In short consumer's surplus is equal to what you are prepared to pay minus what you actually pay.

9. Consumer's Surplus and the Law of Diminishing Utility. The concept of consumer's surplus is derived from the Law of Diminishing Utility. The following table indicates the variations in utility in the purchase of mangoes.

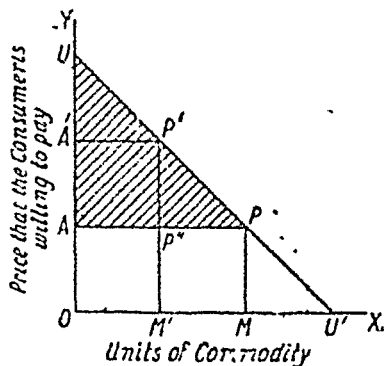
Mangoes purchased	Total Utility	Marginal Utility
seers	Measured in annas	
1	20	20
2	38	18
3	54	16
4	68	14
5	80	12
6	90	10
7	98	8

The above is the statement of utility to a particular consumer going to a market for mangoes. Suppose the price in the market is 12 as. per seer. The consumer will purchase as many mangoes as bring his marginal utility equal to the price. Thus he will purchase 5 seers of mangoes and pay for them 60 as. But his total utility from 5 seers of mangoes is measured by 80 as. He gains a consumer's surplus measured by 20 as. This is so because he would have paid 80 as. rather than go without mangoes, but he actually pays only 60 as. If the price rises to 16 as. a seer he will purchase only 3 seers and pay 48 as. instead of 54 as. This will give him a consumer's surplus measured by 6 as. and so on.

Below is given the diagrammatic illustration of consumer surplus.

Along OX are measured units of commodity to be purchased, and along OY is measured the utility in terms of money, which means price that the consumer is willing to pay rather than go without a particular unit of the commodity.

If the market price is PM, the consumer will extend his purchase up to the Mth unit. He will purchase OM quantity. This is so because for this amount his marginal utility is equal to the price. But his marginal utility for the earlier units is more than PM. For



M'th unit, for instance, his marginal utility is P'M'. But he only pays the market price PM ($=P''M'$) for this unit as for others. He thus obtains an excess of utility for the M'th unit equal to P'P''. This is consumer's surplus for the unit. The total consumer's surplus thus derived by him when OM units are purchased at PM price is shown by the shaded area UAP. If the market price rises to P'M' he will purchase only OM' quantity, and the consumer's surplus will fall to the smaller triangle UA'P'.

10. Can Consumer's Surplus be Measured? It looks as if we can. We have explained above that consumer's surplus is simply the difference between what we are prepared to pay rather than go without and what we actually pay. Or it can be ascertained by the following formula.

Consumer's surplus = Total utility

— Price \times Number of units purchased

How simple !

The measurement of Consumer's Surplus is not as simple as that. There are numerous difficulties which stand in the way of precise measurement of Consumer's Surplus :

1. *Complete list of demand prices is not available.* We are aware of a part only of the demand schedule. As we do not know what prices we are prepared to pay for every one of the units, Consumer's Surplus cannot be ascertained. What we may be prepared to pay for certain units is all a guess work and theoretically the objection is sound. But in actual practice, we are concerned with that part of the demand schedule with which we are fairly familiar. Reactions to small changes in prices are fairly well known. In real life we are not concerned with hypothetical scarcity prices.

2. Consumer's surplus in the case of necessities of life and conventional necessities is indefinite and immeasurable. In case of necessities of life, as well as conventional necessities, there is no positive satisfaction. In their case there is only removal of pain.

rather than giving of pleasure. Patten calls it 'pain economy'. Only when the necessities of life have been satisfied that there can be any idea of consumer's surplus. It is to this stage, which Patten calls pleasure economy that consumer's surplus belongs.

3. *Consumers' means vary.* Some consumers are rich and others poor. The poor consumer makes a greater sacrifice to get a commodity even though he pays the same price as the rich. The rich man is prepared to pay much more for a thing than go without. This difference in the consumer's circumstances makes the measurement of consumer's surplus difficult and inexact. This difficulty is met by the idea of average. When there is a large number of purchasers, rich and poor, the variation in individual circumstances may be ignored.

4. *Consumers Differ in Sensibilities.* Every consumer has his own tastes and sensibilities. Some desire a commodity more ardently than the others and are therefore prepared to offer more. This difficulty is also met as in the above case by the idea of average. When we deal with consumers in the bulk individual tastes and sensibilities may be supposed to cancel themselves out.

5. *Marginal Utility of Money Changes.* As we go on buying a commodity less and less amount of money is left with us. Hence the marginal utility of each unit of money increases with every successive purchase of a commodity. But when we measure consumer's surplus we do not make any allowance for this change in the marginal utility of money. This means that our conclusions are not scientifically accurate. In reply to this objection, we may point out that in actual practice only small amounts of money are spent on the purchase of individual commodities. The changes in the marginal utility of money are negligible and are of no practical importance.

6. There is the further difficulty that with every increase in the purchase of a commodity the urgency of the need for the earlier purchases is diminished and their utility decreases. This decrease in the utility of earlier units is not taken into account when calculating the consumer's surplus. To measure consumers' surplus precisely it is suggested that the earlier parts of the list of demand prices should be continually redrawn. But this objection is based on a misconception. This objection would have been valid if the utility written against each unit were the average, and not additional utility, because only the average can change at every step and there is no need to change the additional utility. Reference to table on page 65. If the consumer buys two seers the average is 19, in case of three seers it is 18 and in case of 4 seers 17 and so on. But the marginal or additional utility will not have to be altered whatever the number of units purchased. Also as Pigou says, "It is highly improbable that slight change in the consumption of anything would have an appreciable influence upon

the utility of the earlier increments, because a considerable change in consumption is necessary to make us aware that any change in 'commonness' has taken place."

(7) Then there is the difficulty arising out of the presence of substitutes. How calculations of utility in their case are upset or rendered difficult has been already explained (p. 54). To meet this difficulty the two substitutes, say tea and coffee, can be regarded as one commodity as suggested by Marshall.

(8) *Commodities used for distinction.* "In such cases, e.g., diamonds, the fall in price will not lead to increase in demand. When such commodities become cheap, they no longer confer distinction on the user. The demand for them, therefore, may fall off. Hence a fall in price in such cases will not increase consumer's surplus."

We may conclude by conceding that the exact measurement of consumer's surplus in a market is an impossibility. But the concept of consumer's surplus is not a useless one on that score. In practical life whether in business or in public finance it is always possible to have a rough and a workable idea about the measure of consumer's surplus.

11 Criticism of Consumer's Surplus. The concept of consumer's surplus has been subjected to scathing criticism by economists like Cannan, Nicholson, Robinson and Davenport. Its scientific character has been attacked on the ground that it is based on assumptions which are unwarranted. Its measurement assumes that utilities are capable of exact measurement and can be translated in terms of money. It further assumes that different units of the commodity have different utilities. Moreover, the utility of each commodity is regarded as something absolute which it is not. While we go on spending money the utility of each unit of the money left with us increases, while the marginal utility of commodity falls. This makes the calculation of consumer's surplus still more difficult.

In the case of necessities and conventional necessities, it seems to have no application, for in such cases the consumer will be willing to pay anything rather than go without. The utility will be infinity. A *lakhpati* (millionaire) may be willing to pay Rs. 1000 for a glass of water in a desert when he is on the point of death on account of thirst but he actually may pay simply one pice, as *belhishish*. The economist may say he has enjoyed a surplus of Rs. 999-15-9. But it will be rather difficult to convince our *lakhpati* of this fact.

It is, therefore, said that the whole idea is *hypothetical imaginary and illusory*. A man cannot always say what he will be willing to pay rather than go without a thing. This inquiry seldom presents itself to him in the market. The price in the market is a fact which he must accept and what he is called upon to decide is how much he will buy. Therefore, there is a good deal of unreality about

this concept. It is further pointed out that if there is a surplus, the consumer will be induced to buy more and more of that commodity till the surplus disappears. It simply cannot exist.

The criticism is indeed damaging. From the strictly scientific point of view the validity of none of these objections can be questioned. But the whole burden of criticism is that it is incapable of precise numerical measurement. This may at once be conceded. But it cannot be denied that something like this does exist in real life. Rather than go without a thing we are prepared to pay more than what we actually pay, and we do enjoy a surplus of satisfaction. How much we cannot say and there will be little good if we could. It certainly tells us that a system of uniform market prices does yield a surplus of satisfaction to some consumers who should have been able and willing to pay more if the alternative was to go without. The *lakhpatis* case taken above does not belong to the ordinary run of life—such situations seldom arise. In real life the transactions are of a type which yield a surplus satisfaction to the consumers.

12. Importance of the Concept of Consumer's Surplus. Although scientifically indefensible, the concept of consumer's surplus has a great practical utility and theoretical importance.

(1) *Conjectural importance.* It enables us to compare the advantage of environments and opportunities or conjectural benefits. A person getting Rs. 200 in Delhi can enjoy better amenities of life than a person, say, getting Rs. 300 in a town more remote from the centre of civilisation. The inhabitant of Delhi enjoys much surplus of satisfaction from his expenditure in Delhi. It enables us also to compare the economic conditions of the people at different times. The larger the consumer's surplus the better off are the people.

(2) *Importance in Public Finance.* The Chancellor of the Exchequer or the Finance Minister considers, while proposing fresh taxation, how much are the people willing to pay for a thing and how will they be affected by a rise in prices resulting from the imposition of a tax. Where the consumers are enjoying a surplus, there is much scope for taxation, for the people are willing to pay more and the rise in the price will not affect the demand much. Such a tax, however, is not very desirable as it will adversely affect human welfare because consumer's surplus is greatest for necessities.

(3) *Importance in theory of monopoly value.* Similarly, a business man or a monopolist will find that he can easily raise prices if the commodity is yielding surplus of satisfaction to the consumers. They will be willing to pay more if need be. As a matter of expediency, however, the business man will not raise the price so much as to absorb the whole of the surplus. He will not drive a hard bargain to that extent. He would like to cultivate and retain the goodwill of his customers and follow, therefore, a policy of compromise.

(4) *Distinction between value-in-use and value-in-exchange.* We

know that market value of a commodity is different from its utility or value-in-use. Commodities like salt and match box have great value-in-use but a very small value-in-exchange. The consumer's surplus from such commodities is very great, for we are prepared to pay much more for these commodities than we actually pay. Consumer's surplus brings home the fact that the price we pay for a commodity seldom comes up to the aggregate satisfaction that we derive from the consumption of a commodity. Consumer's surplus depends on the total utility, i. e., value-in-use, whereas the price or value-in-exchange coincides with marginal utility. The doctrine of consumer's surplus, therefore, clearly brings out the distinction between value-in-use and value-in-exchange.

(5) *Consumer's surplus measures the benefits from international trade.* By entering into trade with another country, we import certain articles which happen to be cheaper. Before we imported them, we were paying more for similar commodities. We have, therefore, made a saving in importing these commodities. They yield a surplus of satisfaction which is measured by the excess of what we would have paid for them over what we have actually paid for them. The larger this surplus, more beneficial is the international trade. Consumer's surplus is thus a measure of the economic advantages we reap from international trade.

13. Sovereignty of the Consumer. Under capitalism or the system of free competition, the consumer has been compared to a king. The entire productive machinery is supposed to work under his sovereign sway. His preferences determine the volume and direction of economic activity. His whims, prejudices and desires seem to rule the world of production. The entrepreneurs of modern industry are his bond slaves and so many agents to carry out his behests. A frown on his face is sure to spell their ruin and a smile sends a thrill through their heart. If the consumer is pleased, entrepreneurs are happy and prosperous, and if the consumer is dissatisfied, the entrepreneurs' fate is sealed.

In the past, the consumer's rule was manifest. He placed the order, say for shoes, clothes, etc., and the maker carried out simply and faithfully the order. The things were made to order and the producers kept waiting for the orders from the consumers. The things were made in style, design, colour or shape exactly to suit the tastes of the consumer. The consumer got what he really wanted. He was undoubtedly the king and his authority was well recognised.

But the modern producer does not work on receiving the orders. He anticipates them. It is the business of the entrepreneur to make a shrewd guess as to what would satisfy the consumer most and then to proceed to produce such commodities or render such services. Production these days is carried on in anticipation of demand. But here again the consumers' preferences exert their full weight. If the entrepreneur is not sufficiently intelligent to gauge rightly the requirements of the consumer or if the prices fixed by him do not suit

the pockets of the consumers, i.e., if he made a wrong estimate of their purchasing power, his goods will not sell. He may struggle for a few years heroically but unless he is able to modify his plans and to make them suit the consumer's tastes and pockets, he will go under, sooner or later. If, on the other hand, he has been able to understand the wishes of the sovereign consumer, and to interpret them rightly, he will be amply rewarded in the form of handsome dividends.

In a capitalist economy that venture will succeed which satisfies the consumers most. The entrepreneur gets the maximum profit when the consumers get the maximum satisfaction, not otherwise. The consumer guides and controls production by the way he decides to spend his income. "Universal consumption is something like universal suffrage; it is a democratic means of control. The only qualification required for consumption is the possession of income with which to acquire the desired goods. In economic elections a consumer casts as many votes as he has dollars to spend. If the economic electorate decides to spend its money for baubles instead of essentials, for shoddy goods instead of genuine articles, for things that are ugly instead for things that are beautiful, such things will be produced. Consumer's choice, whether it is wise or foolish, guides the operations of our industrial system. It is like closing an electric circuit and thereby turning on a current that sets the wheels of the productive mechanism into motion."¹ The rationale of all economic activity is the satisfaction of the consumer's wants.

14. Limitations on Consumer's Sovereignty. But the consumer is not so despotic a monarch as he is supposed to be. At best his case may be of one of constitutional or limited monarchy. A constitutional monarch reigns but does not rule. On further reflection we shall find that there are some serious limitations on the authority of our sovereign, the consumer.

(a) The most important check on his authority arises from the size of his income, the length of his purse. The things do not move according to his command unless he uses the money whip. Without that whip in his hand, he may cry hoarse, nobody would listen to him. The consumer wants pure ghee but he has to rest content with Dalda for lack of means to pay. The real wants of the consumers go unsatisfied under the present economic system and only those can be satisfied which are expressed in money and become effective.

Further the individual consumer goes to the wall. It is only the combined demand which directs.

(b) The satisfaction of the consumer depends on the goods actually available in the market. He may want a slightly different thing but cannot help. He may cry for the moon, he will not get it. There are physical limitations too. Actual production depends

1. Kieckhefer, W. H.—Economic Principles, Problems and Policies, 1936, p. 652.

upon technical knowledge at the moment, and development of technique may lag behind consumer's desires. We want noiseless trains but we must wait till the technique develops. Consumer's preferences are generally ahead of what is available at the moment.

(c) High pressure salesmanship and persistent advertisement multiply the real desires of the consumers. The business propaganda machinery is directed to mould and to control consumers' tastes. No consumer can resist its subtle effects. He is thus induced to buy something different from what he would have purchased otherwise. Our sovereign, the consumer, is impotent and helpless and is led by the nose, as it were. That business man succeeds who does not merely satisfy the felt wants of the consumers but who is able to control and direct the consumer's tastes towards his particular brand. Huge amounts are spent on advertisement in every country. A mere glance at a newspaper, or a magazine, is enough to show what importance is attached to advertisement. Wherever the consumer goes and in whichever direction he looks, some advertisement faces him. At every strategic corner on the road sides, on the railway platforms, on the trunks of trees and telegraph poles, on the houses and the trams, he finds large and attractive advertisements, all intended to catch his eye. These advertisements are for this king so many fifth column elements all calculated to make his sovereignty a mere negation. Far from controlling the producer, he is controlled by the producer. According to Ely, "expenses in the United States for national advertising alone are estimated to average nearly 10 dollars for every man, woman and child. The cost of advertising in each issue of the *Saturday Evening Post* is nearly a million dollars"¹. Here is another estimate. "In the United States alone about half a million persons are normally employed in advertising and that nation's annual advertising bill runs from 1½ to 2 billion dollars."² These amounts are not being spent to please the consumer but to enrich the producer. Every rupee spent on advertisement and salesmanship is a nail in the coffin of the consumer's sovereignty. We do not agree with Benham when he says that a monarch may be advised and cajoled, as to some of his activities, even by his slaves, but he remains a monarch none the less. This is a nominal sovereignty, a very poor specimen of monarchy indeed.

Here is an evidence of the consumer's helplessness. "No doubt the public is spending a tremendous amount yearly—and it comes from those who can least afford it—for sun lamps that are both a fire and health hazard, for toasters that we dare not touch once they are heated up, for automatic irons that burn and destroy fine rayon goods when set for the lowest temperature, for curling irons, vibrators, massagers which are so poorly insulated that only a person totally ignorant to the potential shock of 110-120 volt supply would dare use such an appliance." This is true of every other line of production.³

1. Ely—*Outlines of Economics*, 1930, p 145.

2. Kieckhefer, *op cit* p 654

3. Moore and Others—*Modern Economics*.

(d) The monopolists, too exercise control over the consumer. In modern times in every country there is a tendency towards combination or cartellisation and a few firms or companies come to control production. They can easily dictate their terms to the consumers who feel quite helpless. They have no say in the matter of price or range of production.

(e) Then there is the government control about which we have now become all very well acquainted. Even in normal times the government either prohibits or restricts the consumption of certain articles, e.g., intoxicants which the society disapproves. By taxing the rich and subsidizing the services for the poor, the government can exert influence on the trends of production. Besides, the government itself is the biggest consumer and is in a position to set the pace in the matter of price and the quality of goods produced.

(f) Consumer's own habits bind him and he is reluctant to make any departure from his set scales of consumption. The freedom to choose, therefore, is not exercised. It is all theoretical.

(g) Environments and conventions of society also exercise a restraining influence on the consumer's choice. Therefore, the unrestricted freedom of the consumer and his authority to direct production is a mere myth.

(h) The consumers are generally ignorant and do not know what is best for them. Their blind choice does not always accord with their self-interest. Lack of knowledge, therefore, is another hindrance in the way of exercise of the consumer's sovereignty. If the consumer is a giant he is surely a blind and sluggish giant.

(i) Production of standardised goods, irrespective of the individual tastes, is a conclusive proof that modern economic system pays scant courtesy to what the individual consumers would like to have. The consumers are bulked together and treated *en masse*, not a king but a herd of sheep.

It is really very difficult to convince a poor villager or a factory hand that he is the sovereign of all he surveys and that factories are working, trains and ships are moving and the business men sitting at their shops or running to and fro in the market are all to serve him and satisfy him rather than lining their own purses. It is so unreal.

The fact is that neither consumers nor producers alone control the other. It is a case of interdependence. Economic prosperity of a country lies in a proper balance between consumption and production. In the words of Ely, "Progress is dependent on alert and responsive consumers as well as on prudent and efficient producers. Sluggish consumers, sluggish producers."

15. Conclusion. Let us now summarise our conclusions as regards the forces behind Demand which we have studied in the department of Consumption. The central problem of Economics is

the determination of values of goods (and services) that are mutually exchanged. Value is the result of the interaction of supply and demand, and is expressed as price in terms of money. We have so far been considering demand. Demand arises because goods yield utility to consumers and scarce goods have to be purchased by money offers. As the marginal utility of goods falls with the increase in the quantities consumed, the consumers offer lower and lower prices for additional quantities offered for sale. For individual consumers, however, prices are already determined. They, therefore, purchase as much quantity of each good as equates their marginal utility for money to the price of the good. The marginal utility of money is higher for poor people than for rich people. But all people distribute their total money incomes on various heads of expenditure with a view to maximising their total utility. This is achieved when the marginal utility derived from each head of expenditure is the same. In this way demand for various commodities is created which can be expressed in the form of a demand schedule. The total of individual demand schedules determines the market demand schedule. We can, therefore, conceive, at any particular time, a large number of consumers willing to purchase goods of varying quantities at varying prices. They are willing to purchase more at a lower price than at a higher price. A competition then ensues among the consumers bidding for commodities. These represent the forces on the side of demand. Demand can rise and fall with changes in tastes, habits and real incomes of the people. But, at any particular moment, such factors may be assumed as constant. This pull exercised by the consumers is only half the story. The other half comes from the side of the suppliers or ultimate producers. We, therefore, pass on to the discussion of the forces determining supply. This brings us to the Department of Production.

CHAPTER VI

DEMAND

1. Demand. We have already seen that demand is different from desire or need. A sickly child needs a tonic and a person desires to have a radio receiving set. But such needs and desires do not constitute demand. When, however, the person desiring is willing and able to pay or is prepared to make a sacrifice and has the means to do so, the desire is changed into demand. Sometimes demand is said to be 'the expression of a want on the part of a person who is in a position to offer something to get what he wants.' But this is not a correct view. I may be willing to offer something for Koh-i-Noor¹. It is not demand in the economic sense. That 'something' must be sufficient or reasonable. In the words of Chapman, '*Demands are the quantitative expressions of preferences*'.

Demand is always at a price. '*The demand for anything at a given price is the amount of it which will be bought per unit of time at that price.*'² In other words, it simply means how much a person will be willing to buy of a commodity at a certain price. At another price he will of course buy a different quantity, more at a lower price and less at a higher price. Demand cannot be understood in an absolute sense. It is wrong to say that A's demand for milk is 5 seers a day, unless the rate is mentioned or implied. His demand is not rigidly fixed at 5 seers daily for all times. It will vary with the variations in the price. To speak of demand without reference to price is meaningless. Also, *the demand is always per unit of time*, per day, per week, per month or per year.

2. Demand Schedule. A list of the quantities purchased or demanded at varying prices is called a Demand Schedule. The following is the Demand Schedule of an individual A for apples:—

Price per Dozen.	Quantity demanded in dozens.
Rs. 7	1
6	2
5	3
4	4
3	6
2	8
1	10

The Demand Schedule for the whole market is arrived at by adding the quantities demanded by all the prospective purchasers at varying prices. Suppose, a market consists of only five buyers (with sellers) called A, B, C, D, and E. Suppose their Demand

1. This point is discussed in Chapman's *Outlines of Political Economy* 1920, p. 23.

2. Benham—*Economics*, 1943, p. 36.

Schedules for apples are as given below :—

Price per dozen.	Quantity demanded in dozens by					Total
Rs.	A	B	C	D	E	
7	1	3	0	0	0	4
6	2	4	1	0	0	7
5	3	5	3½	1	0	12
4	4	5½	4	1	1	15
3	6	7	5	3	2	23
2	8	8	6	4	3	29
1	10	11	8	5	4	38

It will be seen that different individuals have different demand schedules, depending upon their marginal utilities for money and their marginal utilities for apples. The last column gives the total demand for the market as a whole. The first and the last columns, put together, will constitute the demand schedule of the market under the conditions assumed by us.

It is the market demand schedule which is of greater practical utility. The government and the business men are only concerned with the market schedule. It is not so fluctuating and fickle as the individual schedule.

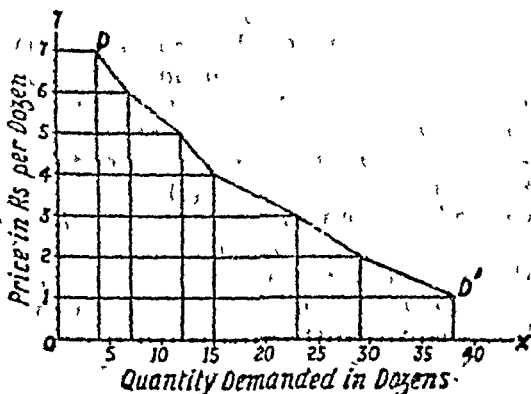
It is, however, very easy to draw an imaginary schedule like the above, but it is a problem to prepare the actual demand schedule of a person and to prepare one for the market is a sheer impossibility. It is not always easy for persons to be able to say how much they would buy at different prices. They have never probably thought of that and cannot be expected to have definite and crystallized ideas in this respect. At best it will be mere guess work and not something to go upon in a scientific analysis. So many influences like changes in taste, fashion, climate, state of trade, etc. may intervene to upset their calculations. It is not something absolute as the utility of different commodities are interdependent. Every person will have different schedule and even the same person will have a different one under different set of circumstances.

3. Utility of Demand Schedule. But this is not to say that the demand schedule, as it is, serves no purpose. Rough and ready as it is, it has great practical utility. We may not be able to give a complete list of quantities we shall buy at different prices from no price to infinity (it will be nothing but a mental gymnastics if we could), but we have all got more or less definite ideas as to how we shall react if the price went up a bit or came down a bit. Within certain limits of the prevailing price we can always make a good guess as to how much we shall buy if the price changed and that is all what matters. It is useless, for example, to think how much I shall buy if the milk is sold at one pice per seer or Rs. 5 per seer. These queries perhaps concern a world different from ours. Considered in this light, the demand schedule assumes a great importance. The Minister of Finance has to estimate to what extent will the people

curtail their purchases in case the imposition of a tax raised the price of a commodity. The preparation of the budget would be impossible without such calculations. The monopolist, too, in search for the maximum monopoly net revenue, will have to consider consumers' reactions to the variations in price. Practical utility of the demand schedule cannot, therefore, be denied.

4. The Demand Curve. A demand schedule can be expressed in the form of a curve called the Demand Curve. The market demand curve of apples is given below :—

Quantities (in dozens) demanded are measured along OX and prices [in rupees] along OY . If perpendiculars are drawn from points indicating quantities on OX and corresponding prices on OY , the meeting points of these perpendiculars will be on a curve. This is the Demand Curve for apples under the conditions represented by the Demand Schedule. It will be seen that the curve slopes from left to right (like the utility curve), showing that as price falls quantity demanded increases, and conversely, as price rises quantity demanded decreases.



5. Why Does Demand Curve Slope Downwards? Generally the demand curve slopes downwards. It is in accordance with the Law of Diminishing Utility. The purchases of most of us are governed by this law. We are induced to buy more when the price falls. When the price falls, new purchasers, who could not buy before, enter the market; old purchasers will probably increase their purchases. The prices are measured along Y axis and quantities along X axis. Only in a curve of this slope shall we find shorter price lines cutting longer pieces in the quantity axis. If the law of diminishing utility is true, and it is generally true, the curve must slope downward, for only then the phenomenon of increasing demand with falling prices can be represented.

But let us go a bit deeper and try to find out *why the demand increases when the price falls*, other things being equal, or why the demand schedule is what it is, or why the demand curve slopes downwards. Bentham has answered this question in this manner.¹ Having a limited amount of money at his disposal every consumer wants to get the maximum satisfaction therefrom. Knowing his own scales of preferences he will, according to the Law of Substitution and Equi-marginal Returns, so arrange his expenditure that he gets

equal marginal utility from the last anna that he spends in different ways. He will keep to the arrangement if the prices remain the same. But if the price of a certain commodity included in his assortment of goods and services fall, then, he must make a corresponding alteration in his expenditure. By the fall in price divergence has been created between the marginal utility and price and this must be rectified. This can be done by buying more of the commodity thus bringing its marginal utility to the level of the price. That is why people buy more when the prices fall.

But there are exceptions too, i.e., when the demand curve instead of sloping downwards will ascend. Sometimes people will buy more when the prices rise. In that case the demand curve will slope upward. Such occasions are very rare but we can imagine some. Benham has mentioned four cases:—(1) In case of a serious shortage is expected, people may be in a panic and buy more even though the price is rising, because they expect the price to go still higher. (2) When the use of a commodity confers distinction, then the wealthy people will buy more when the prices rise to be included among the few distinguished personages. (3) Just in sheer ignorance sometimes people buy more at higher price. (4) If the price of a necessary of life goes up, the consumer has to readjust his whole expenditure. He may cut down his expenses on other food articles, and in order to make up, more may have to be spent on this particular food, more of which will, therefore, be purchased in spite of high price.

6. The Law of Demand. We are now in a position to formulate the Law of Demand which simply expresses the relation between quantity demanded and the price. It says that *demand varies inversely with price not necessarily proportionately*. "Amount sold is the function of the price of the good." If the price falls, demand will increase and vice versa. It can also be stated thus: "*A rise in the price of a commodity or service is followed by a reduction in demand, and a fall in price is followed by an increase in demand, if conditions of demand remain constant.*" Or "at any given time, the demand for a commodity or service at the prevailing price is greater than it would be at a higher price and less than it would be at a lower price."

The qualifying phrases "at any given time", or "the conditions of demand remaining constant" are very important because demand is subject to several influences which will be discussed presently and the operation of any of those influences will counteract the law.

It may also be added that no proportionality in the change is implied. If the price falls by 10 per cent, it does not follow that the demand will increase exactly by 10 per cent. We can only say that the demand will increase when the price falls but not how much. This will depend on the elasticity of demand which we shall discuss shortly.

1. Ibid, pp. 47-48

2. Thomas, S. E.—Elements of Economics, pp. 52-53.

7. **Have the Consumers Definite Scales of Preferences?** From the Law of Substitution and the Law of Demand it appears that the consumers have definite scales of preferences. This has been objected to. Benham examines some of these objections. (1) That the changes in the conditions of demand, e.g., season, taste, fashion, etc., upset the system of demand. But the demand schedule is based on the assumption that these things do not change. If these things change, then we can have a new schedule which will then represent the new scale of preferences. (2) That people do not buy exactly the same thing over and over again, e.g., order the same dinner. But our schedule can provide for sufficient variety whenever necessary over a period of time. (3) That some part of our income is earmarked already by our decisions in the past, e.g., hiring of a house. But even this can be changed after some time and all income is not earmarked. The rest of the income is enough to enable us to make the necessary adjustments. (4) That purchases are not made by the consumers themselves but by housewives or by parents on behalf of children. Our demand schedule has nothing to do with the motive or who buys and on behalf of whom. It is a fact that all expenditure is arranged in conformity with the Law of Equi-marginal Returns, whatever the motive or whosoever may be the agency. (5) That the consumers do not know their preferences. But we have already shown that they are fairly conscious of what they will do if the price movements remain within fair limits of the prevailing price and that is enough. There is thus not much in these objections. The demand schedule is based on solid assumptions. We can safely assume that the majority of the consumers act prudently, whether consciously or unconsciously, and that nobody carelessly or deliberately throws away his money. Everybody must try to maximise his satisfaction from his limited resources. He must have, therefore, definite scales of preferences. When the price falls, it will pay him to buy more and he will do so. The demand curve will ordinarily slope downwards.

8. **Systems of Demand.** A commodity is never wanted by an individual as an isolated commodity. It is wanted as a part of a system. A student wants a fountain pen. But fountain pen alone does not fulfil all the needs of a student. He also wants paper, books, pencil, a table, a chair, etc. All such things go to form a system of demand. *We demand things in groups.*

The necessities, comforts and luxuries that a consumer enjoys all constitute one system of demand. They are inter-related and interdependent.

An individual's demand system is determined by his standard of living. The standard of living is not an individual thing. It depends on the class of the society to which the individual belongs. If he belongs to a poor class, his system of demand will consist mostly of the necessities of life. If, on the other hand, he belongs to the upper class, many comforts and luxuries also will figure in his

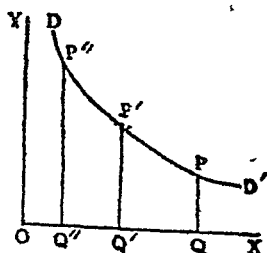
system of demand. It is standard of living which governs the system of demand.

But the standard of living itself is moulded by so many factors like tastes, sensibilities, idiosyncrasies of the individual, his education and above all his income. Every change in income is followed by a change in the system of demand. When income increases percentage expenditure on food and other necessities of life decreases and *vice versa*. Miser is an exception. He may simply hoard the wealth he acquires. He may continue living shabbily, and eating scantily, wearing dirty and scanty clothes and using a hovel for a house. This is his system of demand. A set of commodities and services constitutes a system of demand.

9. Changes in Demand The Law of Demand expresses a relation between demand and price. If the price rises demand decreases and *vice versa*. But the words *increase* or *decrease* used with demand when the price falls and rises respectively are not considered quite correct. The proper words should be *extension* and *contraction* of demand. Let us understand the difference between extension and increase on the one hand, and contraction and decrease on the other.

We use the words *extension and contraction of demand* when the demand changes simply because the price has changed. It is the change in the price which leads to a change in the demand. In the absence of any such change there would have been no change in demand. The consumer plays a passive part. He is solely led by price. His demand schedule is fixed and there is a corresponding curve and he goes up and down the curve simply without the least deviation, as shown in the following diagram. —

Our consumer travels on the curve DD' . That is his set route fixed by his scale of preferences. At PQ price he will buy OQ ; if the price rises to $P'Q'$ he will buy OQ' ; and if it rises still further, his demand will be reduced to OQ'' . If the price starts a reverse movement he will slide back. He has fixed his own preferences and now he is entirely at the mercy of price. This is extension or contraction of demand. The same demand schedule and demand curve serve the purpose.



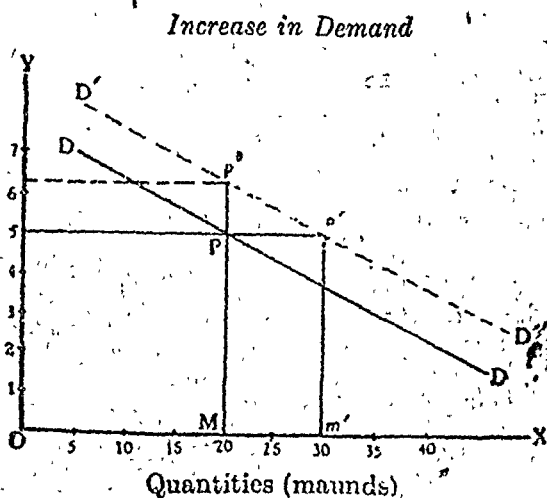
Take now the *increase or rise of demand*. Here the consumer fixes his own demand, increases it or decreases it irrespective of the price. He plays the active part. He is guided by his own domestic requirements and circumstances, rather than be a servant of price as in the former case. The increase in demand implies a change in the basic conditions of demand and hence a new schedule and a new demand curve. A man's income may have increased or his

family requirements may have increased. A new scale of preferences becomes necessary. In this case there will not be movement along the old curve, but along a new curve. The consumer ignores the price in this case.

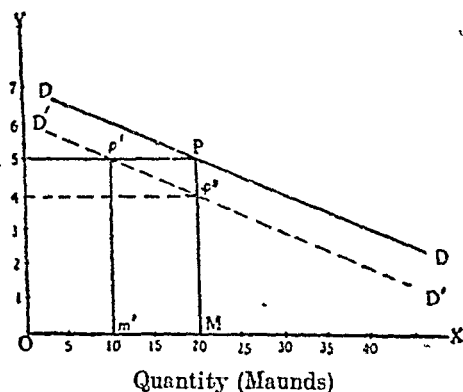
For example, if the price of milk falls from 6as. a seer to 5as. a seer and our consumer begins buying 5 seers daily instead of 4 seers, it is a case of extension of demand. But if he is prepared to buy 5 seers instead of 4 seers even though the price remains the same or continues to buy the same old quantity even if the price rises, they are cases of increased demand or rise in demand. In both of these cases he is prepared to spend more than before, whereas in case of extension there may be no increase in the total outlay, for he buys more at reduced price. To sum up, *extension of demand means more quantity at lower price and increase or rise in demand means either more quantity at the same price or same quantity at a higher price.* Similarly while *contraction of demand means smaller quantity at a higher price, decrease or fall in demand means either less quantity at the same price or the same quantity at the lower price.* They can be represented by diagrams as follows —

10. Curves Showing Increase and Decrease in Demand. The increase and decrease in the demand (for onions) are illustrated in the form of curves below :—

A l o n g OX measure quantities in maunds and along OY prices in rupees per maund. Before the change in demand, at five rupees per maund (PM) 20 maunds of onions (OM) were demanded. Now suppose that the same 20 maunds are demanded at a higher price of $6\frac{1}{2}$ rupees per maund ($p''M$) or at the same price of 5 rupees ($PM = p'm'$) 30 maunds (OM') are demanded. Then points



p'' and p' are on a new demand curve ($D'D'$) which will indicate an increase in demand. Note that DD is not necessarily parallel to $D'D'$.



The second figure illustrates decrease in demand. Before the change the demand at 5 rupees (MP) is 20 maunds a (OM). If after the change in demand at the same price of 5 rupees ($PM=p'm'$) 10 maunds (Om') is demanded or at a lower price of 4 rupees ($p''M$)

the same amount 20 maunds ($=OM$) is demanded, points p' and p'' will be on a new demand curve $D'D'$ illustrating a decrease in demand.

When, therefore, we discuss changes in demand we mean that conditions of 'Demand' have changed. Old demand schedule and the demand curve no longer serve the purpose and must be replaced by new ones. The consumer has overhauled his scales of preferences. It is not merely a case of extension or contraction of demand but increase or decrease of demand. This is what we want to discuss now. We want to study the changes in the very conditions of demand.

11. Why Demand Changes. There are several factors which bring about changes in demand. There are so many outside influences affecting the consumer's scales of preferences and compelling him to recast his demand schedule. Erich Roll mentions three types of changes: (1) *Autonomous changes* for which there seems to be no apparent reason. Somehow, spontaneously the changes come about. Nobody can really say why sometimes men decrease the width of their trousers; some increase it; some decide to have double-breasted coats, then single breasted and again double-breasted. The ladies sometimes take to sleeveless blouses and at other times full sleeves. These are the dictates of Dame Fashion issued as it suits her caprice. To us the change is unaccountable. (2) *Repercussive changes*, which are due to the repercussions of certain other factors. Demand may change because technical progress has brought to our door several new brands of a commodity. Seasonal changes may also have their repercussions. (3) *Induced changes*. These changes are brought about by the hypnotising influence of advertisement or publicity or are foisted on us by the sweet persuasive salesmanship. The Tea Marketing Expansion Board has been able to induce people to take to tea so that almost every one today takes tea. The entre-

preneurs do not always produce to meet an existing demand, but it is now more common for them first to produce and then through propaganda create a demand for their goods. Not only the existing market is preserved but new markets are conquered. New customers are appealed to and convinced that the commodity in question will be useful to them.

Let us now briefly note the various causes which bring about changes in demand.

(i) *Changes in tastes and in fashions.* Increasing habit of tea-drinking has decreased the demand of a large number of families for milk. Changes in the mode of dress mean a change in the demand for the dress material. The fashion among ladies to keep hair long or short brings about changes in demand for hair pins, hair nets, etc.

(ii) *Climate or weather changes.* It is obvious that demand must change with the season. In winter there is a greater demand for warm clothing, a certain types of tonics and a greater demand for coal or fuel. In summer, there is a demand for electric fans and cooling drinks and ice.

(iii) *Changes in population.* If the gates of British Dominions and America are opened for Indians, we can expect a large exodus. The Dominion which is flooded with these immigrants will find a new demand created. If Indians stick to their own mode of living in food and dress, demand for such things will be created.

It is not merely the change in the size of the consuming population, but changes in the composition of the population, too, which will affect demand for certain commodities and services. In a country of increasing population like India, where hundreds of children are born daily in big cities, there will naturally be demand for toys, feeding bottles and nipples and perambulators. The engagement and destruction of youth in war has brought about a reduction in the number of marriages and a decrease in the demand for wedding presents and other things used in marriages. A time will come when, in a country like Germany where destruction of young people has perhaps been the greatest, most of the men will be old and demand for artificial teeth, eye glasses, etc., will increase.

(iv) *Changes in the amount of circulating media.* Where there is inflation, as it is in India now, the additional money will add to the purchasing power in the community and the prices will rise. But the rise of prices will not be uniform in the case of all goods. People will have to readjust their expenditure as has been the case all these years; demand for certain things will be reduced and for others stimulated. Shortage of sugar increased demand for *gur* and *shakkar*, and restrictions on the supply of electricity created a demand for kerosene lamps.

(v) *Changes in real income.* Here we have a phenomenon quite opposite to the one mentioned above, viz., of falling prices. A dis-

inction is made between money income, *i.e.*, the amount of money which a man may earn, and real income which means the quantity of goods and services which he can buy with that amount of money. In times of technical progress when fruits of research are placed at the disposal of industry, there is a large output of cheap products. The purchasing power of money increases or, as it may be said, real incomes increase. Less money will be needed to purchase the same quantity of goods and the saving so made will find outlets in the purchase of some other commodities. The demand schedules will have to be recast. If the prices fall to 50% of their former level, it is unlikely that we shall buy double the quantity of each of the commodities that we have been buying before, *e.g.*, we cannot consume double the quantity of salt or wheat. On the other hand, those who have been living on maize or bajra may now change over to wheat. Better 'stuff' will replace the inferior one. Some goods may be eliminated and entirely new goods purchased; demand for some goods decreased and for others increased." In conformity with the Engel's Law of Consumption, some redistribution of expenditure and alteration of scales of preferences may be expected.

(vi) *Change in wealth distribution.* If through the instrument of public finance, *i.e.*, by taxing the rich and spending money on the poor, the Government effects a redistribution of wealth and transfers spending power, demand is bound to be affected. The goods demanded by beneficiaries will be in the greater demand and the goods which were formerly consumed by those whose purchasing power has been reduced, will suffer an eclipse.

(vii) *Goods with inter-connected value* In case of substitutes, *e.g.*, tea and coffee, an increase in the consumption for one will lead to a decrease in the demand for the other. In the case of complements, *e.g.*, horse and carriage, increased demand of one will augment that for the other.

In the case of joint supply, *e.g.*, wheat and straw, the increased demand for one will lead to the cheapening of the other and may, therefore, stimulate its demand, too, after some time.

When there is a case of *joint demand* the increase in the demand for the ultimate object, *i.e.*, the house, will increase the demand for everything needed in building a house.

In the case of *Composite Supply*, *e.g.*, light obtained from electricity, gas or kerosene cheapening of any one of them will reduce the demand for others.

In the case of *composite demand*, *e.g.*, water required for drinking, washing, bathing, etc., any extension or contraction of its uses will correspondingly change the demand.

Hence the demand for a commodity does not depend only on its own price but prices of other goods too.

(viii) *Conditions of trade.* Demand for everything is greater in a boom even though the prices are rising. On the other hand, in time of depression there is general slackening of the demand.

12. Elasticity of Demand. One of the very important concepts in Economics is that of Elasticity of Demand. We have studied the law of demand and we have seen that there is an inverse relation between demand and price. If the price rises, demand contracts and *vice versa*. A change (rise or fall) in price leads generally to a change (contraction or extension) in demand. This attribute of demand by virtue of which it stretches or contracts under the pressure of a change in price is known as Elasticity of Demand. "The term elasticity expresses the degree of correlation between demand and price."

But the demand does not always respond to the changes in price in like proportion. A small change in price may lead to a great or marked change in demand. In that case we shall say that the demand is *elastic* or sensitive or responsive. If, on the other hand, even a big change in price is followed by only a little change in demand, it is said to be a case of *inelastic* demand. Even if the price of salt varies widely we continue to buy almost the same quantity; the demand is inelastic. But if the price of wireless sets falls, many people, who could not afford before, may now be induced to buy, the demand will stretch or expand; it is elastic. In the words of Marshall, "*The elasticity (or responsiveness) of demand in a market is great or small according as the amount demanded increases much or little for a given fall in price, and diminishes much or little for a given rise in price.*"

13. Relation of Elasticity with The Law of Diminishing Utility. The concept of elasticity of demand can be connected with the Law of Diminishing Utility. Marginal utility varies with supply. It falls when the supply is increased and rises when the supply contracts. But the fall of marginal utility does not occur at a uniform rate in all commodities. In certain cases like salt, we get soon fed up and the marginal utility falls very rapidly. In such cases the demand is inelastic and no fall in price can induce us to buy more. In some other cases the marginal utility comes down very gradually, e.g., some luxury articles like silken clothes. Any decrease in the price of such commodities is sure to stretch the demand. The demand is therefore elastic. In short, *the demand is inelastic when the marginal utility falls rapidly and elastic when it falls slowly.*

14. Elasticity Varies With Price. Not only does the elasticity of demand vary with different articles, but it may also vary in the case of the same commodity for different ranges of prices. In other words, the elasticity of demand is not uniform over all the parts of the demand schedule; it may be fairly elastic over a part and then become inelastic over the remaining part of the demand schedule. Take the case of wheat. If it is selling at a high price, say Rs. 10 per md., a reduction in price up to Rs. 3 per md will increase the demand. Then the people will have bought as much as they need and further lowering of the price will be ineffective in stimulating demand of most people.

15. Elasticity of Demand and Consumer's Surplus. The nature of demand has also a bearing on the amount of consumer's surplus. In the case of necessities and conventional necessities the demand is inelastic. Their prices in the market are fairly low but the consumers are prepared to pay much more for them than they have actually to pay. The difference between what they are prepared to pay and what they actually pay represents consumer's surplus. We find, therefore, that the *consumer's surplus is large where the demand is inelastic and small where it is elastic.*

16. What Determines Elasticity of Demand. It is not possible to classify goods according to the nature of their demand and lay down certain rules to determine whether demand is elastic or inelastic. But we can only formulate some broad generalisation. We cannot be dogmatic and say definitely that the demand is elastic or inelastic. No classification of goods can be an absolute one.

The question of elasticity, too, therefore is a relative one. It is relative to a person or place. For one person or at one place the demand may be elastic and for another person and at another place it may be inelastic. Subject to this very important proviso we may lay down the following rules :—

(i) *For necessities and conventional necessities the demand is inelastic or less elastic.* We must buy these commodities whatever the price and buy in fixed quantities irrespective of the price. A change in price is not going to matter, so far as the demand for such commodities is concerned. Salt is one such thing and wheat is another. But in a poor country like India even the demand for such things is somewhat elastic. In 1923 the doubling of the salt duty reduced the consumption of salt in India. The change in the price of wheat may be immaterial for upper and middle classes but its consumption will certainly increase among the poor, when the price falls. In a country where salt is comparatively scarce, the demand will be elastic. It is wrong, therefore, to lay down as an absolute rule that demand for necessities is inelastic. The term necessary itself has no fixed connotation.

(ii) *Demand for luxuries is elastic.* It stands to reason that lowering of the price of a thing like radio sets, refrigerators and artistic furniture will lead to more of them being bought. But by whom? Certainly not by the rich people. For then these things are conventional necessities. They must buy them and having purchased one, they will not buy another whatever the price. Their demand, therefore, is not elastic. We cannot lay down a generally applicable rule, because terms luxuries and necessities are relative terms. They are relative to a class of people. A high priced luxury of the poor man is a low priced necessity for the rich. A thing may be luxury in one country and a necessary in another and luxuries of yesterday have become necessities of today. We cannot dogmatise.

(iii) *For substitutes the demand is elastic.* When the price of tea rises, we may curtail its purchase and take to coffee and *vice versa*.

Changes in price will lead to expansion or contraction in demand. But very few things can serve as suitable substitutes; even coffee is not exactly like tea. Attempts have been made in Italy, America and Argentina to replace our jute but without much success.

It might be supposed that in the matter of toilet you have several alternatives. You might use Pond cream or 'Beauty cream', Listerine or Maclean tooth paste, Hamam soap or Prefect soap, Kiwi polish or Cherry Blossom and so on. But can you really use any of them? The manufacturer does not want that his good should belong to the elastic demand category. He would like to make it indispensable for you. For that purpose he gives it a special label and by subtle and persistent propaganda, through all the media of advertisement, he will induce you to buy them. You become habituated to their use and you are not satisfied until you get that particular brand. Cherry Blossom does not satisfy you if you have used Kiwi nor do the Gillette blades if you have been using 7'o Clock. By branding his product the manufacturer has insulated it from its rival goods which could serve as substitutes and has built up a monopoly of an ordinary article. He has changed its demand from elastic into inelastic by clever advertisement. Substitutes are, therefore, no substitutes. For purposes of knowing whether the demand is elastic or inelastic, we should classify goods not as luxuries and necessities but substitutes and non-substitutes. Then we can definitely say whether it will be elastic or inelastic.

(iv) *Demand for goods having several uses.* Demand for such goods is elastic. Coal is such a case. When cheap it will be used for cooking, heating and industrial purposes; its demand will increase. But when the price goes up, it will be put only to very urgent uses and less will be purchased. The demand will contract.

(v) *Demand for goods the use of which can be postponed is elastic.* Most of us during the war suspended our purchases in matters capable of postponement, e.g., building a house, buying furniture or having a number of warm suits. We go in for such things in a larger measure, when they are cheap. Their demand is elastic.

(vi) *Elasticity also depends on the level of prices.* If a thing, say diamonds) is either very expensive or like wheat very cheap, the demand will be inelastic. In the latter case all those people from whom the demand for diamonds comes will cease buying. They are purchased as a mark of distinction. When, therefore, they become cheap, they will lose their attractiveness. In the words of Marshall, 'Elasticity of demand is great for high prices, and great or at least considerable for medium prices, but it declines as the price falls, and gradually fades away if the fall goes so far that satiety level is reached'.¹

(vii) The same commodity may have inelastic demand for certain uses, e.g., wheat for human food, and elastic for certain other purposes, e.g., wheat used for feeding the cattle.

The above discussion confirms us in the view that it is not possible to lay down any hard and fast rule as to which commodity has

1. Marshall—Principles of Economics, 1936, p. 103.

an elastic demand and which inelastic. It all depends on the circumstances of the case and each must be examined on its own merits. When we want to know whether the demand is elastic or inelastic, we must decide the class of people with reference to whom we wish to ascertain the fact.

17. Measurement of Elasticity. For practical purposes it is not enough to know whether the demand is elastic or inelastic. It is more useful to find out to what extent it is so. For that purpose it is essential to measure elasticity.

Two methods have been suggested for the measurement of elasticity —

First Method :—To compare the total outlay before and after the variations in price. Elasticity of demand is expressed in three ways : (1) Unity, (2) Greater than unity, and (3) Less than unity. It is unity, when, even though the price has changed, the total amount spent remains the same.

Elasticity is said to be greater than unity, between two prices, when with the fall in price the total amount spent increases or the total amount spent decreases as the price rises.

Elasticity between two prices is considered to be less than unity when the total amount spent increases with the rise in price and decreases with a fall in price. It is well to remember that *elasticity is measured as between prices.*

It will be clear from the following schedule ;—

Price of pencils per dozen	Quantity demanded	Total outlay
(1) Re. 1/8/-	3 dozen	Rs 4/8/-
(2) „ 1/4/-	4 „	„ 5/-
(3) „ 1/-/-	5 „	„ 5/-
(4) „ 1/2/-	6 „	„ 4/8/-
(5) „ 10/-	7 „	„ 4/6/-
(6) „ 8/-	8 „	„ 4/-

As between (1) and (2) the elasticity is greater than unity, because the total amount spent decreases when the price rises and increases when the price falls. As between (2) and (3) it is unity as the total amount spent remains the same. Between (4) and (5) the elasticity is less than unity because the total amount spent increases when the price rises and decreases with a fall in price.

Second Method :—In this method we compare the percentage change in price with the percentage change in demand. Suppose the price rises by 50%. If the demand decreases by 50%, elasticity is unity, if it decreases by more than 50% it is greater than unity, if it decreases by less than 50% it is less than unity. The formula is :—

$$\text{Elasticity} = \frac{\% \text{ change in demand}}{\% \text{ change in price}}$$

The measurement of elasticity is very important for the business man and the finance department of the government, because

they are interested in finding out how much total amount will be spent by the people on a particular commodity. On the basis of this information, the business man will fix the price and the government the scale of the tax.

18. Diagrammatical Illustrations of Elasticity of Demand.

The following diagrams illustrate the various degrees of elasticity.

DD' is the demand

curve in every case.

Elasticity equal to

zero and infinity can

be theoretically con-

ceived only. In the

former DD' is parallel

to OY, in the latter to

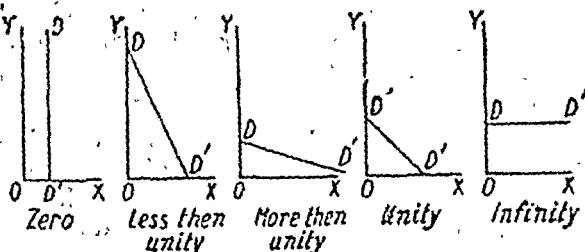
OX. The smaller the

elasticity the nearer

the position of the curve to that under zero,

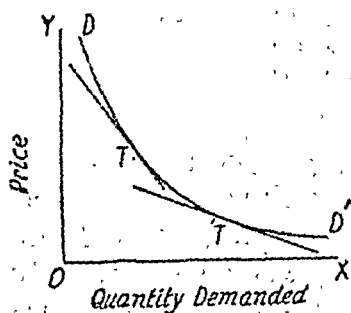
and the greater is elas-

ticity the nearer the position of the curve to that under infinity.



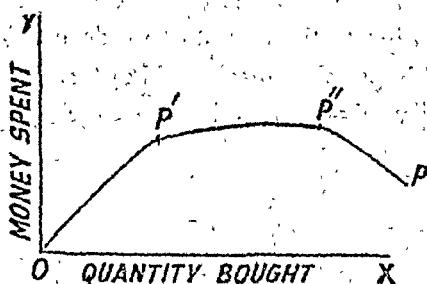
In the above examples, for the sake of simplicity, we have taken demand curves as straight lines. When they are not straight lines but are curves showing different slopes at different points, the elasticity of demand at any particular point is indicated by the slope of the tangent to the curve at that point. This is shown in the figure.

Thus demand curve is more elastic at point T' than at point T.



Benham gives the following diagram showing at a glance the elasticity of demand.

OP is the demand curve. The total money spent is measured along OY and the quantity bought along OX. When the curve is rising from left to right, i.e., up to P', it is greater than unity. When it is horizontal, i.e., P'P'', it is unity and when it is falling, i.e., P''P, it is less than unity.



19. Practical Importance of the Concept of Elasticity of Demand. This concept is of great practical importance in the sphere of government finance as well as trade and commerce. The minister of finance can be more sure of his revenues if he taxes those commodities for which demand is inelastic. The tax will no doubt raise

the price, but the demand being inelastic, people must buy the commodity, and the demand will not decrease. But, on humanitarian grounds, such taxes are generally avoided because such commodities being necessities of life, their taxation is bound to affect public welfare.

In the same manner the business man, especially if he is a monopolist and can fix his own price, will have to consider the nature of demand. In case it is inelastic it will pay him to charge a high price and sell a slightly smaller quantity. If, on the other hand, the demand is elastic, he will lower the price, stimulate demand and thus maximise his monopoly net revenue.

This concept finds application in the case of joint products also. The separate costs are not ascertainable. The producer will be guided mostly by demand and its nature while fixing price. The transport authorities fix their rates according to this principle when we say that they 'charge what the traffic will bear'. When an industry is subject to increasing returns, the manufacturer lowers the price to develop the market so that he may be able to produce and take full advantage of the economies of large scale production. We, therefore, see that the discussion of elasticity is not merely of academic interest.

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CHAPTER VII PRODUCTION

The Nature, Volume and Agents of Production

1. **Introduction.** In the theory of consumption, we discussed the problems and principles governing the utilisation of limited resources for the satisfaction of human wants. We were concerned with the disposal of scarce means for multiple ends. In production we are concerned with the means themselves or the forces behind the supply of goods. We want to see how these means are made available. In other words, we are concerned with the efforts devoted to procuring and mobilizing the resources of the community and placing them at the disposal of those who want them.

2. **What is Production?** Production is sometimes defined as the *creation of utility* or the creation of want-satisfying goods and services. It is said that just as man cannot destroy matter, he cannot create matter. The best that he can do is to give it utility.

But this is not a scientifically correct definition. In Economics we are not concerned with mere utility but with scarce goods possessing utility. Air has great utility, but being unlimited in quantity no economic problems arise in connection with it. To produce a thing which has utility but not value is not production in the economic sense. I may spread the cult of Yoga and promote physical and spiritual well-being of my friends, a thing of great utility, but unless I make it my profession, my activity will not come under production. *Production, therefore, should be defined, not as creation of utility, but the creation or addition of value.* More strictly speaking we should define it as the creation of economic goods and rendering of services commanding a money value. We really do not produce utility or value but produce goods and services having value-in-exchange. We are not concerned with the technique of production, but merely with its economic aspect.

Considered in this sense production consists of a long chain of producers covering the following industries:—(1) *Extractive industries* including mining, fishing, farming, etc., mostly concerned with the production of raw materials. (2) *Manufacturing industries* turning raw materials into finished goods. (3) *Commercial Services* like buying and selling, transporting, banking and insurance, etc. (4) *Direct Services* to the consumers like the services of domestic servants, doctors, lawyers, teachers, etc.

The producer creates utility having an exchange value in three ways, (a) *Form Utility*, i.e., shaping the thing and making it serviceable, (b) *Place Utility*, i.e., carrying the commodity to a place where

it is wanted ; and (c) *Time Utility*, i.e., keeping it for a time when it is needed. Robbins calls them Time and Space Indices. Production, therefore, is not merely producing things. The thing is not considered 'produced' unless it reaches the hands of the consumers. In the words of Ely, "Things are not fully produced until they are in the form in which they are wanted, at the place at which they are wanted, and at the time when they are wanted."

3. The Social Significance of the Volume of Production.

It is of the utmost importance for a country that its production should be conducted at the highest pitch of efficiency so that the volume of its production is the largest possible. If agriculture is carried on with the most primitive methods, if holdings are uneconomic, irrigation facilities scanty and the man behind the plough illiterate and conservative, the production of food articles and raw materials will touch a very low level. Similarly, in the industrial sphere, production will be much less than it can be if the entrepreneurs are ignorant, timid and short-sighted, if the labour force is inefficient, if the machinery used is out-of-date and if credit and transport facilities are not available to the extent required. In such a country, as India is, the volume of production will be very small. *In the last resort the standard of living of a people must depend on the volume of production in the country.*

True, a country may borrow from abroad or receive moneys in charity to tide over a period of stress and difficulty. But loans have to be repaid and charity is not a perennial stream. No sure foundation of standard of living can be built on these extraneous or fortuitous resources. If the standard of living is to be raised permanently, the country's volume of production must be increased. The Bombay Plan of economic development for India, the avowed aim of which is to raise the standard of Indian masses, rightly emphasises the necessity of increasing production. They propose to increase the output of industries 500%, agricultural production 130% and the value of services 200% in the course of fifteen years. Only then they hope to provide a balanced diet, 30 yards of cloth per head per annum and a reasonable housing accommodation in addition to ample educational and medical facilities. Increase in production must precede the raising of the standard of living.

The volume of production in India is very small in relation to its teeming millions and the standard of living is the lowest in the world. Poverty is writ large on the face of every Indian, poverty of which the world has no parallel. Not much relief can be expected from emigration. The only remedy is to increase the volume of production, agricultural and industrial. The volume of production possesses for us the greatest social significance.

4. **Factors Determining the Volume of Production.** In our efforts to increase the volume of production we shall have to analyse the factors on which it depends. A study of these factors and a proper appreciation of their relative importance will put us on the high road to increased production.

(1) In the first place, production in a country depends on men, money and materials. If our men are hardworking and resourceful, if capital is plenty and if our land turns out a rich variety of materials, a large volume of production is assured. Production in a country is limited by the quality and quantity of the factors of production available in the country. We need Land, Labour, Capital and Organization of the right order and in sufficient quantities. These are the prerequisites of good production.

(2) Production also depends on the development of technique and the application of science to agriculture and industry. In the absence of scientific and technical knowledge not much can be achieved. It can be easily seen that the Industrial Revolution which made use of the various inventions and discoveries brought about a tremendous increase in the volume of production in the West. What can a hand-weaver achieve in the face of a gigantic mill?

(3) Production depends further on the development of credit, banking and transport facilities. The manufacturer is seriously handicapped if there are no agencies to give him financial accommodation. Finance greases the wheels of productive machinery. Also, there will not be much use in producing goods unless they can be cheaply and quickly transported to their markets.

(4) The political factor is also a very important one. If the state takes a sympathetic view and actively assists in production by providing intelligence, education and financial and other aids, production can be accelerated. The Russian experiment is a sufficient indication of what can be achieved in this way.

(5) Finally, there is the natural factor. Climate, soil, mountains and rivers are all nature's gifts. Their bearing on production can hardly be exaggerated. Floods, earthquakes and other natural calamities undo man's work. We must learn to harness nature's forces for the service of man if production has to be increased and protected.

5. How to Measure the Volume of Production. We have seen that production is the source out of which the standard of living in the country can be maintained. Attempts have been made to measure the volume of production to see whether a community has adequate supply of goods and services at its disposal to satisfy its wants to a reasonable extent. The measure of production is the measure of the adequacy of the satisfaction of the wants of a people.

There are two methods generally applied for the measurement of the volume of production: (1) Census-of-production method, and (2) Census-of-income method. In both cases a unit of time is taken which is generally a year. During the year most of the crops have matured and have been harvested and monthly irregularities would cancel themselves out. Production of all types means a full course throughout the year. The incomes and profits, too, are estimated yearly.

According to the first method, production of all types of goods is estimated. The production of food products and materials is estimated from agricultural statistics. In India Government publishes a blue book entitled "Area and Yield of Principal Crops" which can help us in estimating the agricultural production of the country. But we want 'net' production; therefore we must make a deduction for carrying on agricultural operations, *e. g.*, amounts spent on seeds, maintenance of bullocks, repairs, renewals and replacement of agricultural implements. Professors Wadia and Joshi while estimating the national income of India for the year 1913-14, deducted 20% from the total agricultural production on this account.

As for mineral production, we can get the value of the various minerals produced in the country from the geological surveys published by the Geological Department. Here again a 20% deduction may be made to find the net value of the minerals. We then come to industry. Government of India began publishing a few years before the war a booklet, 'Monthly Production of Certain Selected Industries in India'. But this is obviously inadequate to give us an estimate of the entire industrial production. In the western countries fuller statistics are available. Professors Wadia and Joshi estimated the total value of industrial production at 20% of the value of raw materials.

A precaution is necessary. We must avoid double counting, *e. g.*, the value of cotton must not again be included while estimating the value of cloth manufactured.

In certain cases, *e. g.*, hides and skins, we can form an estimate from the export figures on the assumption that a certain percentage is exported yearly. We must also estimate the value of the livestock. The Government of India publishes a quinquennial census of livestock with the help of which we can estimate the value of the livestock in order to know the total material wealth of the country. Here again to avoid double counting the value of their services to agriculture must be deducted. The production of fisheries can be roughly estimated from the total number of fishermen engaged in the industry at the rate of a few annas per head per day.

Production does not consist merely of goods but also of services. Therefore, on the basis of census figures, we can estimate the earnings of the various professional men like doctors, lawyers, teachers, artisans, domestic servants, etc., at an average income. We cannot add together heterogeneous types of goods and services. We can only take their money value. But to eliminate the effects of price fluctuations, we can estimate them with respect to a base year.

The second method (census-of-income method) depends on intensive surveys conducted in representative villages and towns and using them as the basis.

It would seem from the procedure outlined above, that it is impossible to eliminate elements of conjecture in such estimates. Mathematical precision is simply out of the question. Comparison between two distant years is further rendered difficult by differences in qualities of goods, new designs and models or by the production entirely of new commodities and services. People's requirements may also change with changes in tastes, in the size and the composition of the population so that the same volume of production may not mean the same satisfaction. We cannot therefore really say with any exactitude whether people's wants are more fully satisfied say in 1948 as compared with 1938.

But it cannot be denied that a rough estimate can be made which can be used as a working basis for practical purposes. It is always possible to say fairly accurately whether the people are enjoying a better standard now than they did say 25 years back. Professors Bowley and Robertson who conducted an inquiry into the statistical position of India in 1933 submitted their report under the heading 'A Scheme for an Economic Census in India'. They confirmed the view generally held that there is a statistical blackout in India.

6. Productive Capacity in Relation to Wants. The aim of production is to place at the disposal of the community goods and services of requisite quality and in sufficient quantity to satisfy its multitudinous wants. Has it succeeded in this aim? Is the productive capacity of a country sufficient to meet the wants of its people? Can a country produce enough to satisfy the desires of the people for the various types of goods and services?

There are people who would answer this question in the affirmative. They hold that the productive machinery has only to be put in the proper gear and it will be able to turn out enough goods for everybody. Let production be keyed to the highest pitch of efficiency. This can be done by training every worker in the latest methods of production and by introducing the most modern machinery and processes. This war has demonstrated that targets unimaginable before can be hit. America alone has been producing more than 5,000 planes every month. It is simple arithmetic that if this process is continued America alone can supply everybody with an aeroplane. Ammunition and other war materials were coming out at a bewildering speed. Even the most sceptical must have been convinced of the marvels of machinery.

It is believed that when the huge productive power created to meet the requirements of global war is fully switched on to civilian production, consumer's goods will pour out in ever-increasing stream so that the markets will be flooded and everybody will be able to satisfy his wants. What a fine dream? But it is said that it is not a mere dream.

The world is fully familiar with the phenomenon of over-production. During the last world-wide economic depression in

Somebody was needed to bring them together and organise them for work. Hence the emergence of the entrepreneur.

8. Classification of Factors of Production. The factors of production have been classified as *Land, Labour, Capital and Organisation or Enterprise*. Land in Economics does not mean mere soil as in the ordinary speech but the whole of animate and inanimate nature exclusive of human beings. It is synonymous with all the natural resources available from air, water, from above the land surface and below it.

Similarly, labour does not mean merely physical or manual exertion but all type of work done by man for a monetary reward. It is synonymous with man.

By capital is meant the whole of the stock of wealth consisting machine tools, implements, raw materials, etc. which is used in the production of further wealth.

Organization consists of bringing the above three factors together, assigning work to each. The entrepreneur, who supplies this factor, designs, initiates and directs production and bears the risk.

9. Can the Factors be Reduced to Two? Some economists reduce this classification from four to two. Land and Labour or Man and Nature on the ground that they are the only original or primary factors, that capital has no independent origin and is merely the outcome of the efforts of Land and Labour, while organisation is merely a form of labour. But, whatever, the origin, capital as a distinct factor of production performs a very important function and occupies an important position. Similarly, the entrepreneur's work is of a distinct type and he is remunerated on a different basis. The role that the entrepreneur plays today overshadows that played by other factors. The fourfold classification would, therefore, better represent the conditions prevailing in the economic world today.

10. The Traditional Classification Criticised. This classification, however, has been challenged recently by economists like Benham, Wicksteed, Davenport as being technological, unscientific and without any special significance. The classification is attacked on the ground that there are very wide divergences between different kinds of labour and marked differences within land itself; nor are capital and enterprise of a homogeneous nature. There is no reason then of putting them in separate categories on the implication that they differ fundamentally from one another, but in themselves they are homogeneous.

Far from being separate and distinct the factors of production can often be substituted for one another. Labour can take the place of machinery and vice versa. The entrepreneur by his ability may be able to save both capital and labour which means the substitution of his skill for them.

Moreover, the separation of land from capital seems to have no logic behind it. To an individual land is capital as it assists in the production of further wealth. Land has been separated from capital because it is limited in quantity, is a free gift of nature and is permanent. It minutely varies in quality and lacks mobility. It may be pointed out that some land is also man-made. Half the area of Netherlands amounting to 13,200 square miles has been recovered from the sea. The Back-Bay Scheme in Bombay also made some addition, however small, to the land surface of Bombay City. But it must be admitted that such efforts are almost negligible and the differences pointed out above are real, though in old countries most of the upper land surface may be considered 'man-made'. These differences, however, for the purposes of economic classification, have no real meaning. Similarly, peculiarities of labour have been exaggerated. This fourfold classification would have some meaning if it could be shown that these categories of the agents of production are subject to the operation of different laws of production or distribution. This, however, is not the case and the classification seems to have no scientific reason behind it except that it is a convenient way of studying the subject.

Instead of there being four factors of production, it is now suggested that there are millions of factors, each acre is a factor of production and so is each worker. In the words of Benham any ingredient which "goes into the productive process at any stage is a factor of production". He suggests, however, that for purposes of simplification all uniform types of land may be put together and called one factor and so all homogeneous labour. This would reduce, to some extent, the number of factors. But it should still run into hundreds.

Although we must reject the traditional classification of factors on scientific grounds, yet in an elementary study it can be retained with advantage to the student who will find the arrangement simpler and conducive to easier understanding. It will do him no harm, as he has been told that it carries no economic significance. All these factors of production are scarce and are capable of alternative uses. The Law of Choice applies to them as it applies to consumers' goods which they produce.

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CHAPTER VII

AGENTS OF PRODUCTION--LAND

Importance of Land as a Factor of Production. Land, as already defined, stands for natural resources.

1. Meaning of Land. In the words of Marshall land means 'the materials and the forces which nature gives freely for man's aid, in land and water, in air and light and heat.'¹ Nature not only gives us land surface but also mountains which provide us with forests and pastures, rivers providing fish, fertilising material and serving as a high-road of commerce as well as sources of electric energy, and seas and oceans—a perennial source of fish and connecting link between one continent and another. The bowels of the earth are full of minerals so indispensable for the running of industry. Air, sunshine and heat are necessary for our crops, nay, for our very existence. The term land epitomises all this.

In every stage of economic evolution, nature has been the man's most useful ally. In the hunting and the fishing stage, nature supplied food almost spontaneously and sustained human life. In the pastoral stage but for land surface and the pastures and meadows, herds of cattle and sheep could not be reared and kept. The utility of land is obvious in the agricultural stage for how else could man grow his crops without soil, air and sunshine? When agricultural stage gives place to handicraft and the industrial stage, land is still essential. Every commodity that we use can directly or indirectly be traced ultimately to land. Look in whatever direction we may, our debt to nature is immense and obvious. Our very existence would be impossible without it. In Marshall's words, "Earth's surface is a primary condition of anything that a man can do, it gives him room for his actions."

2. Peculiarities of Land. In contrast to other factors of production land presents certain well-marked peculiarities, which have a direct bearing on some important problems of Economics, e.g., of determination of economic rent and the theory of population.

(i) *Land is a Nature's Gift.* It is, however, pointed out that man has reclaimed forest land and marshes through his own effort by expensive schemes of clearing and drainage, and that by admixture of clay and manures he has changed alkali land and deserts into fertile fields. Land is as much 'man-made' and a 'produced' factor as any other. Whatever may have been the position in the beginning, it is said, modern generation is not so much disposed to regard land as a gift of nature.

But man's achievements in the making of land are insignificant as compared with what nature has done for him. As for air, sunshine and location of a plot of land, man has done practically

3. Marshall—Principles of Economics, 1936, p. 133.

nothing and they are as much a part of nature as the land surface itself. We shall, therefore, reiterate our debt to nature for this gift.

(i) *Land is limited in quantity.* It cannot be increased. Man's efforts in this direction, as has already been mentioned, are negligible and have not resulted in any appreciable increase in the land area. It is said that *land has no supply price*. It has no cost of production. Price of land prevailing in the market cannot affect its supply. Higher price cannot attract more of it and a low price cannot lead to its withdrawal; Land is there, and there it will remain. There is no difference between stock and supply in the case of land. That is why as population increases it comes to command a scarcity rent.

(ii) *Land is permanent.* In spite of the havoc wrought by bombing in the war, land will resume its productivity after a short and simple treatment. There are inherent properties of the land which Ricardo called 'original and indestructible.'

(iii) *Land lacks mobility* in the geographical sense. Although some vine-growing clay has been transported from France to California, yet land cannot be bodily transferred from one place to another, a fact which is responsible for disparity of rents in different places.

(iv) Finally, land provides *infinite variations* of degrees of fertility and situation, so that no two pieces of land are exactly alike. This peculiarity explains the concept of the margin of cultivation.

3. Productivity of Land and the Factors on Which it Depends. The value of land's contribution to production depends on its productivity which, in its turn, is determined by several factors.

(i) *Natural Factors.* The most important set of factors on which the productivity of land depends are the *natural factors*. Some parts of India, like the Indo-Gangetic plain are very fertile, others are arid and barren, and then there are deserts like Rajputana. They are what nature made them. Distribution of rainfall is all nature's part and man is helpless. Indian agriculture is said to be 'a gamble in the rains.' Some parts of the globe are hot and others cold. What can man do? Thus the texture of the soil, climate, minerals, mountains and the river systems are beyond human control. Productivity of land, therefore, is largely determined by natural factors.

(ii) *Human Factors.* But productivity also depends on the *human factor*. Man has tried to make a conquest of nature. Forests have been cleared, marshes drained off and through irrigation facilities the barren lands have been transformed into smiling gardens. Electricity has been generated from rivers, pent-up energy of nature has been pressed into the service of man to make summer cool and winter warm, and to turn night into day. This story of

man's conquest of nature is a fascinating story. Somewhere nature has been completely conquered, at other places held at bay and at still other places its inclemencies mitigated and bounties enhanced. Man tries to control nature and mould her into yielding the best of results. But scientific system of rotation, judicious selection and careful sowing of the seed, deeper ploughing and heavy manuring, the yield per acre has been immensely increased. You have simply to compare the yield per acre in India and America and you will see what difference the application of science to agriculture makes. If left alone, nature would have yielded a fraction of what it yields today. This is due to the human factor aiding the natural factor and controlling it where necessary.

(iii) *The Situational Factor.* Another important factor on which the productivity of land depends is the *situational factor*. A plot of land even of comparatively poor quality situated near the city is considered much more productive than one situated in a remote part. Situation makes all the difference. Accessibility to market enhances considerably the value attached to a piece of land for saving of transport cost makes sometime a lot of difference. Here again man can do much to minimise the disadvantages of a bad situation by providing efficient and cheap transport facilities.

4. Extensive and Intensive Cultivation. We have seen that men's efforts have been directed to wresting the maximum reward from niggardly nature. There are two methods of cultivation adopted by man, (1) Extensive cultivation, (2) Intensive cultivation.

In *extensive cultivation*, man brings more and more land under the plough without making any appreciable increase either in his own effort or in the capital that he applies to land! He cultivates a plot of land and when its natural properties have been exhausted, he takes in another and so on. New land is cultivated, and the old one is left fallow. We see in India some fields of a farmer are left uncultivated for a season so that they may naturally recuperate their productive powers. In new countries where land is enough and to spare, man follows the extensive method of cultivation. His aim is to maximise the return for his effort and capital even though it may involve a wasteful use of land. Under such conditions an individual farmer has at his disposal a large tract of land which produces enough for him. But he does not bother about the proper treatment of land, because land is abundant and cheap.

The other method is known as the *intensive method* of cultivation. In this case land is supposed to be very much limited so that a farmer has only a small holding. Naturally he must make the most of it. He is prepared to work hard on it himself and invest lot of capital. He must buy the best of implements and till the land thoroughly and deep. He must select his seed with a meticulous care and sow them with proper spacing. His farm must have ample irrigation facilities. To make up for the loss of productiv-

powers the farmer must put in sufficient natural or artificial manure. He must adopt a plan of systematic rotation. In short, his method must be scientific. Only then he can make his small farm yield the most. In this case there is increased application of labour and capital as distinguished from the first method where there is increased use of land.

5. Does the Extensive Method Imply a Large Farm and the Intensive Method a Small One ? Not necessarily. We generally do find that where land area is vast and farms are large, the farmer follows the extensive method of cultivation, and where land is relatively scarce he must cultivate the same plot of land more intensively. But this is not always so. In the U. S. A. and Canada there are very big farms but the farmers make them yield the most by adopting the latest scientific methods of cultivation which we have called the intensive method. In India, on the other hand, where the peasant is poor and ignorant, cultivation is being carried on by the most primitive methods which may be called the extensive method. Hence extensive methods and large farms, and intensive methods and small farms do not always go together.

6. Organisation of Farming. Productivity of land also depends, among other things, on the way in which it is organised. There are several systems of farming prevalent in the world and they can be broadly classified as under :—

(i) *Peasant Proprietor System.* In this system the owner of the land is also the cultivator. This system prevailed in Russia before the Red Revolution and even now prevails in Prussia and France. It prevails in East Punjab.

Several advantages are claimed for this system. The farmer, being the owner, does his best to develop and improve his land. He is sure that he will reap where he has sown. The care and affection and assiduity that is devoted to land is almost proverbial. As Arthur Young says, "Give a man a secure tenure of a rock and he will turn it into a garden, give him a nine years' lease of a garden and he will turn it into a desert,"—"the magic of property turns sand into gold". Productivity per acre will be very high and nothing will be done to damage the land and everything will be done to conserve its energies and improve its value. The farmer works ungrudgingly and unsparingly.

Social and political advantages, too, are claimed for this system. It produces hardworking, self-respecting and law-abiding citizens. They are considered the backbone of society, and at the time of war they are the most fertile recruiting grounds. Having a stake in the country, they make for social and political stability. The son follows the father's occupation and enjoys all the benefits of inherited skill and family prestige and traditions.

But the system is not free from defects. The holdings are generally small and there is a tendency for further subdivision and

fragmentation of holdings. A small farm does not provide a full scope for the organising ability of an enterprising farming, nor any scope for scientific rotation of crops and for the use of modern machinery. The capital at the disposal of the farmer is very meagre. As a matter of fact, the dead weight of debt presses him down. He is born in debt, lives under debt and dies in debt passing the debt on to those who follow him. Progressive agriculture and making an enlightened use of the land is not possible under such conditions.

Socially and politically, too, the system is defective. The peasant's frugality borders on parsimony and we have an undernourished population, ignorant, superstitious and conservative, who do not keep an open mind but resist the flow of all modern ideas. Such people act as a drag on political progress for they dread all change.

The greatest obstacle in the path of Indian agriculture is this system. The abler farmers cannot acquire more land. Restrictions on transfer of land make for divorce between the ownership of land and ownership of capital. Capital cannot flow towards land under this system. In the absence of any co-operative action, the farmer is seriously handicapped in marketing his produce. We would seriously hesitate in recommending this system for adoption or extension elsewhere.

(ii) *The Landlord and Tenant System or Zamindari System.* As it prevails in England the landlord besides giving his land, provides farm house and fixed stock, builds roads and drains and makes other permanent improvements, and the tenant provides stock and running expenses. The tenant-farmer is a sort of entrepreneur. He buys seed, hires labour, carries on all the agricultural operations, meeting all the expenses and appropriates all the profits after paying a fixed cash rent to the landlord. This system prevails in England. On the whole it works well. The tenant-farmer appreciates the value of the landlord's equipment. But the Indian zamindar is simply a blood sucking pipe drawing rent collected through heartless agents. The landlord lives in the city leading a luxurious life taking little interest in land. "Next to war, pestilence and famine," says Carver, "the worst thing that can happen to a rural community is absentee landlordism." This has certainly fallen to the lot of our rural community.

(iii) *The Metayer or the Batai System.* It prevails in Southern Europe and also in some Southern American States. It is also very common in East Punjab villages. The cultivator, finding his own land insufficient, takes it from another owner who himself cannot cultivate it. The produce is divided in agreed proportions, generally 50-50. This system has the merit of adjusting the rent according to fortunes of cultivation. If the crops fail then the rent which the tenant has to pay is automatically adjusted, for he has to pay only a share of the actual produce. But the tenant cannot have the heart to put in more effort and capital when the owner

LAND

gets a share of the increased productivity without raising his little finger.

(iv) *Lease-hold System.* Under this system land is taken on lease for a number of years on a fixed annual payment of cash as lease money. From the public point of view this is not a good system. The farmer tries to squeeze the utmost out of land without putting back anything in it in the form of manure. Successive and constant cropping impoverishes the land and especially towards the expiry of the lease it is very much impaired. The owner generally regrets to find his property so ruthlessly and callously treated. It will be better, therefore, if the deed provides for rebate on account of improvements and compensation for unexhausted developments.

7. Size of the Farm : An Economic Holding. What is the proper size for a farm? No definite and dogmatic answer can be given to this question.

Some people advocate large farms on the ground that in that case agricultural operations can be mechanised. There will be scope for division of labour and also for proper rotation of crops. The farm can be enclosed; a farm house can be built on it, roads made and pucca drains provided. Marketing can be effected with greater efficiency and economy, for the proprietor can relieve himself of the routine operations and can devote attention to methods of general economic policy.

But the small farms offer advantages of their own. Close personal supervision is possible. The operations will be more carefully conducted, and specialised crops like vegetable and fruit gardening, which require unremitting care and attention, can be cultivated. There will not be any labour trouble and land will be made to yield the most per acre.

But whether we should have a small farm or a large one cannot be decided in such an absolute and offhand manner. There are so many factors to be considered, viz., available irrigation facilities, capital at the disposal of the farmer, nature of the soil, nature of crop to be sown, cost of machinery relative to the hiring charges of labour, etc. Only then we can hit upon what is called an *economic holding*. According to Keatinge "an economic holding is one which allows a man a chance of producing sufficient to support himself and his family in a reasonable comfort after paying his necessary expenses." In Dr. Mann's opinion, it is one "which will provide an average family at the minimum standard of life considered satisfactory, 'minimum standard of life' and 'reasonable comfort' are vague phrases. We can define an economic holding in a general manner as one which will provide fullest possible employment to the capital and other factors at the disposal of the farmer. Most of the holdings in India are uneconomic. The average size of holding is 2.45 acres in Bengal, 2.96 acres in Assam, 2.5 acres in the U. P. and less than three acres in East Punjab, whereas in England about half the number of farms are

of 100 acres each and the commonest size is 60 acres. This explains why Indian agriculture is very inefficient.

3. Law of Diminishing Returns. In the absence of the law of diminishing returns "the science of political economy," says Cairnes, "would be as completely revolutionised as if human nature itself were altered." Such is the importance of the law of diminishing returns in economic theory.

The Law of Diminishing Returns can be studied from two points of view: (1) as it applies to cultivation of land; and (2) as it applies everywhere, *i.e.*, the law in its general form.

It is the practical experience of every farmer that increased application of labour and capital to a piece of land does not yield proportionate return. If by doubling labour and capital he could double the yield of his land, it can be easily seen that only one acre of land could be made to produce as much wheat as could suffice for the entire population of the world. That this cannot be done is simply due to the fact that if he doubled his investment in land, the yield would no doubt increase but it would not be double, *i.e.*, the increase in the yield will be less than proportionate. As a farmer goes on applying successive 'doses' of labour and capital to his farm, the extra yield that he obtains by the application of each successive dose goes on decreasing. The total output will increase but at a diminishing rate. It is just the law of diminishing utility applied to the cultivation of land. In the law of diminishing utility, too, we find that the extra utility goes on decreasing as more and more units are consumed.

9. Limitations to the Law of Diminishing Returns. (i) *Improved methods of cultivation.* It is assumed that the conditions of cultivation are static and not dynamic as they actually are. Therefore we find that in actual practice man's ingenuity is ever-striving to counteract the operation of this law by improving the technique of cultivation. Scientific rotation of crops, improved seeds, modern implements, artificial manures and better irrigational facilities, etc., are bound to give increasing return. But science cannot keep face with the increasing demand for food on account of increase in population. The niggardliness of nature must ultimately assert itself and the Law must operate sooner or later.

(ii) *New Soil.* Again, when a virgin soil is brought under cultivation the additional return for each successive dose of labour and capital may increase for a time and after a point the tendency to diminishing returns will be visible. Prof. Marshall has stated the Law in its final form thus:—

"Although an improvement in the arts of agriculture may raise the return which land generally affords to any given amount of capital and labour, and although capital and labour already applied to any piece of land may have been so inadequate for the development of its full powers, that some further expenditure on it even with the existing arts of agriculture would give more than a

proportionate return yet these conditions are rare in an old country and except when they are present, the application of increased capital and labour to land will add a less than proportionate amount to the produce raised unless there be meanwhile an increase in the skill of the individual cultivator. Secondly, whatever may be the future developments of the arts of agriculture, a continued increase in the application of capital and labour to land must ultimately result in a diminution of extra produce which can be obtained by a given extra amount of capital and labour."¹

10. Tabular Representation of the Law of Diminishing Returns. Consider the following table :—

Yield in maunds of wheat, from a 50-acre farm.

1	2	3	4
No. of Workers	Total Produce	Marginal Produce	Average Produce
1	80	80	80
2	170	90	85
3	270	100	90
4	368	98	92
5	430	70	86
6	480	50	80
7	504	24	72
8	504	0	63
9	495	-9	55
10	470	-25	47

From this table it appears that there are three different concepts of the Law of Diminishing Returns

(1) *Law of Total Diminishing Returns* (Column No. 2). "In this sense, the returns begin to diminish from the 9th worker. Every successive worker employed does make some addition to the output. But the 8th adds nothing and the 9th and 10th are a positive nuisance. As men cannot be had in *begar* (gratis) no prudent farmer will employ more than seven workers in the conditions represented by this table.

(2) *Law of Diminishing Marginal Returns* (Column 3). The marginal returns go on increasing up to the 3rd worker. This is so because the proportion of workers to land was insufficient and the land was not being thoroughly tilled. This phase of cultivation is unstable and will not be found in practice. When the farmer knows he can get more than proportionate return by employing an extra hand, he will certainly do so. The marginal, i.e., the additional return, goes on falling from the 3rd man onwards till it drops down to zero at the 8th. The 9th and 10th men are merely a cause of obstruction to the others and are responsible in making the marginal return negative. It should be remembered that the

¹ Marshall—Principles of Economics, 1930, p. 153

marginal return is not what can be attributed to the last man whose employment is considered just worth while, as all men are supposed to be alike. The marginal return is simply the addition that the marginal worker makes

(3) *The Law of Diminishing Average Returns* (column 4). The average return reaches the maximum at the 4th worker, *i.e.*, one step later than the marginal return reached the maximum. Then the marginal return falls more sharply. The two will equalise somewhere between the 4th and 5th, *i.e.*, when the 5th works part time. But we do not employ men in fractions in real life. Therefore it is not always possible to equalise the marginal and the average returns. It is also clear that it is possible for the average output to increase while the marginal output falls or, in the words of Chapman, "a rise of the output per unit of expenditure is consistent with the fall in return per unit at the margin."

The Law of Diminishing Returns represents the most efficient combination of factors. We see, therefore, that the stage 1-3 workers will not be found in practice, because the number of men is insufficient to till the land properly. The addition of more workers will yield more than proportionate return. Nor will the stage 8th-10th workers be found economical, because the extra hand does not add to the total output, then why should the farmer incur the expenditure of employing him? Here there is waste of labour. Therefore in actual practice the stage 3-7 workers for this farm will be found in operation. In this stage it is worth noticing that as the number of workers is increased, the average return per man diminishes, *i.e.*, from 92 mds. to 72 mds. Also, as the proportion of land to labour is increased (looking from bottom upwards from 7 men per square mile to 3 men per square, each worker having more land to himself) the average return per acre also decreases (504 to 270 mds divided by 50). (Column No 2 gives the total output for 50 acres and as you go upwards from 7 men in this column the total output goes on decreasing and hence the average per acre will also decrease). Thus land and labour are combined in actual practice in such a manner that as the proportion of any one of them increases to the other, its average product decreases. Thus Diminishing Returns show most efficient combination of factors of production. You can get increasing return per man if you give him too many acres and you can get increasing return per acre by putting too many men on land. But you will be wasting acres in the first case and men in the other. Increasing return, therefore, may mean either the wasteful use of land or of workers. Diminishing return, on the other hand, will represent the most efficient combination of land and labour.

How many men exactly will the farmer employ? He will not employ less than three because till then the marginal output (*i.e.*, the addition made by each extra worker) goes on increasing and he will not employ more than seven because the 8th is useless (here the marginal output, *i.e.*, the additional output when he is employed is

zero) and 9th and 10th are worse than useless. He will, therefore, employ any number between 3 and 7. How many exactly? If labour could be hired free of charge, then the employer will go on taking more and more men even if he added little to the total product, *i.e.*, till the marginal product is zero. But man is not a free good. He has to be paid a wage. The farmer will, therefore, compare the wage and the value of the marginal product. He will employ such a number where the marginal product is equal to the wage paid. This last worker considered just worthwhile will be called the marginal worker. If the wage falls it may become worthwhile to employ more workers and *vice versa*.

11. Law in the Intensive and Extensive Forms of Cultivation.

It may be seen that when either land alone is increased or labour alone is increased, the average return for the factor increased would diminish. This gives rise to two forms of diminishing return—Extensive and Intensive. The farmer first cultivates the best lands (considering both situation and fertility). So long as the value of the additional product exceeds the expenses of cultivation he goes on taking inferior and inferior lands, and he will stop further extension of cultivation where the additional income is equal to the additional expense. This is known as the marginal land. Considering the price prevalent in the market and the expenses of cultivating it, it is found to be just worthwhile to cultivate it. This is the *Law of Diminishing Returns in the extensive form*.

But when the farmer goes on putting more and more doses of labour and capital in the same piece of land, each successive dose will yield less than proportionate return. He will stop further application of the doses where the extra expense is equal to the extra income obtained. The last dose, the application of which is considered just worthwhile, is called the marginal dose. This is the *Law of Diminishing Returns in the intensive form*.

It is well to emphasise that in this discussion it is assumed that the *return or output is measured in quantity and not in value*, otherwise it may be that the additional return has decreased but price having risen its value is higher. We shall not call it increasing return.

12. Can the Law of Diminishing Returns be Counteracted?

Yes, the law can be, and has been, counteracted. Anything which improves the quality of the land and makes it yield more, or anything which *adds to the value of the yield* will check the operation of the law. Use of modern implements, judicious mixing of soils and manures, careful selection of the seed and proper sowing, deeper and deeper tillage and the provision of ample irrigation facilities can enable us to counteract the working of the law. *Scientific cultivation, in short, can check the operation of the Law of Diminishing Returns*. In all advanced countries application of Science to agriculture, improvement of transport and marketing facilities have held the law in abeyance. Agricultural development in the West, especially in Russia, have had startling results. Such measures are badly needed

in India, for the bulk of our population depends on agriculture and productivity is almost the lowest in the world.

13. Application of the Law of Diminishing Returns. We have discussed above the Law of Diminishing Returns in relation to land. But it does not apply merely to land. Its operation may be traced also in other extractive industries like mining, fisheries and also in buildings.

As for mines, at first better situated and more accessible ones will be worked and when mining operations are extended to less convenient and remote mines or when the same mine is worked deeper, and deeper, the return to labour and capital invested will be less than proportionate. There is, however, one difference: the mine is just a store. Once exhausted, it is finished for ever, whereas land if properly treated is a perennial source of crops. But it need not frighten us. Coal is valued as a source of energy and the energy can be obtained from wind, water and waves.

The Law also applies to fisheries. When fishing operations are concentrated on one point in the river or on the sea-shore further efforts will yield less and less catch. Deep-sea-fishing may respond better and yield increasing returns. Here again it is probable that if fishing is conducted on a large scale with scientific apparatus for a long time, returns will begin to diminish. But if left undisturbed for a season or two, the fisheries will recuperate and will become productive again. However, it must be recognised that it has to be left to nature. Man has no control and no means of culture just as he has in the case of land cultivation.

As for the buildings, those that are better situated will command higher rents and as you move away from the centre, the rent will go on decreasing. The law cannot be counteracted by erecting storeys on the building, for as you go up, inconvenience is increased and the rent decreases.

14. The Law of Diminishing Returns is Universal. It has been pointed out that the law of diminishing returns applies to agriculture and other extractive industries and one thing that is common in all these industries is the supremacy of nature. *It is therefore often remarked that the part that nature plays in production corresponds to diminishing returns and the part which man plays conforms to the law of increasing returns.* The inference is that agriculture, where nature is supreme, is subject to diminishing returns, while industry, where man is supreme, is subject to increasing returns.

Now there is no doubt that there are very strong reasons why agriculture is subject to diminishing returns. The agricultural operations are spread out over a wide area and supervision cannot be very effective. There is not much specialisation in the processes and every worker is expected to do a number of jobs at the same time. Scope for the use of machinery is very much limited. Therefore economies of large-scale production cannot be reaped. There are further limitations arising from the seasonal nature of the industry.

The ripening of the crop depends on sunshine and general weather conditions and must take its full time. So the farmer is up against several bottlenecks. Moreover, the agricultural operations are likely to be interrupted by rain and other climatic changes. Man feels so helpless. There are numerous slips between the cup and the lips. A hailstorm, untimely rain or any other calamity like locusts or a pest may undo all the man's efforts. Man is not a complete master of nature and no wonder that the law of diminishing returns operates in agriculture.

Similarly, it is understandable that manufacturing industries should be subject to the law of increasing returns. Here man's ingenuity has the fullest scope to work itself. By the introduction of division of labour and the use of most modern appliances, production can be increased to unimaginable limits. Concentration of workers under one roof renders supervision easy and effective. Nature's malignant influences are held constantly away. Man is free to plan, undertake and execute. He can realise all the possible economies, internal and external.

The raw material, however, represents nature's part. If the raw material used is large in quantity, e.g., in sugar industry, paper industry and pig iron industry, the prospects of increasing returns will be somewhat limited. If, on the other hand, the raw material costs are almost negligible, as in the case of pin making industry, man has full and free field and possibilities of increasing returns will be great indeed.

But it is wrong to classify industries as those subject to diminishing returns and those that are subject to increasing returns or to say that agriculture is subject to diminishing returns and manufacturing industries to increasing returns. The law of diminishing returns applies everywhere. To borrow Wicksteed's words, "this law is as universal as the law of life itself." Its application is not confined to agriculture only; it applies to manufacturing industries too. If the industry is expanded too much and becomes unwieldy and unmanageable, supervision will become lax and the costs will go up. The diminishing returns will set in. The only difference is that in agriculture they set in earlier whereas in industry much later and a prudent industrialist may not allow that stage to come for long. Agriculture, too, in the beginning has increasing returns. Hence both laws apply in all types of industries extractive as well as manufacturing. As a matter of fact they are two aspects of the same law, which is also known as the Law of Proportionality.

15. Modern Conception of the Law of Diminishing Returns. The discussion of the law of diminishing returns in relation to land since the times of English Classical Economists, has obscured its real significance. There is nothing peculiar about agriculture, for the law to be exclusively associated with it. As a matter of fact the law has been held at naught by scientific agriculture in progressive

CHAPTER VIII

AGENTS OF PRODUCTION—LABOUR

1. **The Meaning of Labour.** In our ordinary speech we understand by Labour all factory and farm workers or a mass of unskilled manual labour. But in Economics the term labour is not used in this restricted sense. *Any work whether manual or mental, which is undertaken for a monetary consideration is called Labour in Economics.* Again the term does not refer to the intensity of effort but its motive. Effort and skill are involved in the work of an athlete, an amateur musician or a painter; a mother takes lot of pains in bringing up her child or a professor teaching his own son. These activities do not come under labour in the economic sense for they are undertaken for pleasure or for love and affection for others, that is, they are undertaken for non-monetary considerations. Nothing is regarded as labour in Economics unless the motive is to earn money. In the words of Marshall labour may be defined as "*any exertion of mind or body undergone partly or wholly with a view to some good other than the pleasure derived directly from the work.*"¹

Marshall classifies workers as hard-handed or soft-handed. In the former may be included the work of engineers, artisans and unskilled workers and in the latter the work of the 'white-collar class, viz., professions like lawyers, doctors, teachers, preachers, etc.

Labour may be exerted in the direct production of a commodity, e.g., making a chair, or indirectly in assisting the work of actual producers so that the commodity reaches the hands of the consumers when they want it or where they want it, e.g., the work of transporting, stocking, distributing, banking and insurance, feeding the workers, supplying them materials and equipment and a host of people rendering direct personal services to the long chain of workers.

The term labour in Economics is therefore used in a very wide sense and in the words of Nicholson 'must be held to include the every highest professional skill of all kinds, as well as the labour of unskilled workers and artisans; we must include not only the labour of those engaged in business in the ordinary sense of the term but that of those employed in education, in the fine arts, in literature, in science, in the administration of justice, and in government in all its branches; and we must include also, not only the labour that results in the permanent form but also that renders services which perish in the act.'²

2. **Productive and Unproductive Labour.** Physiocrats, the French economists of the 18th century, started this controversy

1. Marshall—Principles of Economic (1936) p. 65.

2. Nicholson—Elements of Political Economy.

of productive *vs.* unproductive labour by saying that only the agriculturists' work was productive. Later, the title was extended to cover the manufacturers' work also. But even as late as Adam Smith the term productive labour was used in a very narrow sense. Adam Smith regards all that work unproductive which does not fix or realize itself in any particular subject or vendible commodity." The services of the domestic servant are unproductive as they perish in the very instant of their performance. He goes on : "The labour of the most respectable orders in society is like that of menial servants unproductive of any value, *e.g.*, the sovereign with all his officers both of justice and order, army and navy."¹ This conception is wrong. According to this view unless labour produces 'material' value, it is branded as unproductive. This notion emerges from the definition of Economics as studying the causes of material welfare. But according to our present conception of economics, it is concerned with the disposal of means which are limited in relation to wants. We would, therefore, regard all activity as productive if it satisfies a human want by the utilisation of scarce means, whether it is a tangible commodity or an intangible service. All the classes of people, therefore, whom Adam Smith regarded as unproductive, are really productive. *In a sense, thus all labour is productive.*

What about the labour which is wasted, misdirected or fails in its purpose, *e.g.*, labour spent in digging the Panama Canal which collapsed ? Marshall² would exclude this labour from the category of productive labour. But this too is not a correct view. Even the labour which failed to fructify did get the remuneration all right. No labour can be said to be completely wasted. The failure is accidental and temporary. The motive was productive and the result is immaterial.

There are certain classes of people, however, who do not make, nor are they intended to make, any contribution to production in the community. They may, on the contrary, detract from it, *e.g.*, pirates, dacoits, thieves, paupers, gamblers, illegitimate speculators; pick-pockets, etc. For themselves their activity is sometimes quite productive. But all such anti-social activities should be regarded as unproductive. The work of the quack or the one who ferments harmful liquors or drugs or that of the writer of pernicious books is regarded as productive in Economics as their services are wanted by some misguided people who are prepared to pay for them. In economics, however, we are not concerned with the ethical side of the matter. Insurance work and legitimate speculation are to be regarded as productive, because their services are useful to the producers.

3. Peculiarities of Labour. Labour is manifestly different

1. Adam Smith : An inquiry into the Nature and Causes of the Wealth of Nations. Annotated by J. R. McCulloch, pp. 93-94.

2. Marshall : *op. cit.*, p. 65.

the price of labour. That labour should be treated differently from a commodity is a social question rather than an economic question. To the economist, as an economist, social considerations are extraneous and irrelevant. The entrepreneur takes advantage of the weakness of the sellers of other materials, if they are ignorant and have little staying power. The supply of several other and essential materials is often inelastic. These so-called peculiarities, therefore, should not lead us to think that laws applying to labour are vastly different. In all phenomena arising out of scarcity of means and multiplicity of ends, the same rule of economic analysis undoubtedly applies.

4. The Quantitative Aspect of Labour. To estimate the labour force of a country, two things have to be considered, the number and efficiency, i.e., the quantitative and the qualitative aspect. Let us take the quantitative aspect first, which relates to the problem of population.

5. Malthusian Theory of Population. Thomas Robert Malthus wrote his essay on Principle of Population in 1798 and modified some of his conclusions in the next edition in 1803. The Essay created quite a sensation in the social and the economic world. The rapidly increasing population of England encouraged by a misguided Poor Law impressed him very deeply and he feared that the pressure of population would pull down the standard of living. He thought England was heading for a disaster and he considered it his solemn duty to warn his countrymen. He deplored "the strange contrast between overcare in breeding animals and carelessness in breeding men."

His theory is very simple. To use his own words : "By nature human food increases in a slow arithmetical ratio ; man himself increases in a quick geometrical ratio unless want and vice stop him."

"The increase in numbers is necessarily limited by the means of subsistence." "Population invariably increases when the means of subsistence increase, unless prevented by powerful and obvious checks."

He bases his reasoning on the biographical argument that every living organism tends to multiply to an unimaginable extent. The elephants double every 100 years. A single pair of thrush would be equal to 19,500,000 after the life of the first thrush and 20 years later 1,200,000,000,000,000,000,000, and if they stood shoulder to shoulder about one in every 150,000 would be able to find a perching space on the whole surface of the globe. According to Huxley's estimate the descendants of a single greenfly, if all survived and multiplied, would, at the end of one summer, weigh down the population of China. Human beings are supposed to double every 25 years and a couple can increase to the size of the present population in 1750 years. So prolific is every specie. The power of procreation is inherent and insistent and must find expression.

But food supply, according to Malthus, is subject to the Law of Diminishing Returns. Every effort to produce additional food for additional population gets less than proportionate reward. The response is far less encouraging. Malthus, then, comes to the conclusion, on the basis of the above two premises, that population tends to increase faster than food supply unless, of course, it is checked by preventive checks or positive checks like war, famine and disease.

In short, the Malthusian Theory of population states that population tends to increase very fast; but food supply does not increase so fast. Hence population tends to outstrip the food supply. If preventive checks, like avoidance of marriage, late marriage or less children per marriage, are not exercised, then positive checks, like war, famine and disease will operate.

6. Criticism of the Malthusian Theory. The Malthusian theory of population has had mixed reception at the hands of the Economists.

1. The critics point out that Malthusian pessimism is not borne out by history in the Western countries. Population has increased but it has not outrun the means of subsistence. In fact people are now enjoying a much higher standard of living than Malthus perhaps could imagine. According to his gloomy forecast the deluge would have come long ago. Not only has it not come but it is receding beyond the horizon.

(2) People have made such a fetish of standard of living that the size of the families has been deliberately restricted by not marrying, or marrying late or having at the most one or two children, so that the social status of the future generation is assured and guaranteed.

(3) Malthus thought that the increase in the means of subsistence would increase population. Far from it. Increase in material prosperity has, perhaps by lowering fecundity, checked the growth of numbers.

(4) Malthus unduly emphasised the production of food, whereas production of wealth in other forms has been found to be a better way of combating the tendency to lower standards of life on account of increased population. Production of food may be subject to diminishing returns but a Country may produce wealth through manufacturing industries enjoying the benefits of increasing returns and import its food from abroad.

(5) The gloomy forebodings of Malthus have been falsified also by the increasing use of contraceptives by the middle and upper classes. The population of the Western European countries, especially that of France, has been notoriously stationary.

It is, however, to be regretted that *population is increasing at the wrong end*. The poor people, who can ill-afford to bring up and educate children properly, are multiplying, whereas the rich, who

can replenish the better quality stock are, for selfish reasons, applying brakes on their breeding propensities. The result is the impoverishment of the nation.

(6) Malthus does not seem to have grasped fully the fact that the Law of Diminishing Returns can be held in abeyance almost indefinitely. Remarkable developments in agricultural technique, means of communication, exchange, etc., have successfully fought this tendency. The Law of Diminishing Returns refers to the stationary equilibrium and it is wrong to apply it to the data of change. The world is dynamic rather than static. The law in its modern conception cannot form the basis of so depressing a theory as the Malthusian Theory of population. The increase in population may lead to more effective utilisation of other productive resources and thus produce more than proportionate returns.

Thus "the production of population is not one of mere size but of efficient production and equitable distribution". (Seligman).

Moreover, mathematical proportions given by Malthus have been challenged. But these were apparently introduced for purposes of emphasis and did not form an essential part of his theory.

Malthusian Theory applies to India. In spite of what has been said above there is a kernel of truth in the Malthusian theory. If population is not checked either by positive checks or preventive checks, it must outstrip subsistence. It is bound to overtake scientific progress. The widespread use of contraceptives may be interpreted as proof of his theory and it shows that preachings of Malthus have gone home. We in India find ourselves in that unenviable position which Malthus feared. We have the highest birth rate and highest death rate in the world. We have been increasing roughly at the rate of 1% per annum and what are the consequences? Grinding poverty, ever-recurring epidemics, famines, communal quarrels, infanticide at one time, the lowest standard of living in the world. It is difficult to dispute the veracity of Malthus' teaching so far as India, China and other backward countries are concerned.

7. Modern Theory of Population : Optimum Theory. Modern Economists have rejected the Malthusian theory of maximum population, which, if exceeded, will spell misery in the country. Instead of the maximum population, modern economists have substituted the idea of the optimum population.

What does the Optimum mean? By optimum population is meant the ideal number of the population that a country should have, considering the resources of the country. The optimum is the best and the most desirable size of the country's population. It is the right number. When a country's population is neither too big nor too small but just that much which the country ought to have, it is called the optimum population. Given a certain amount of resources, the state of technical knowledge and a certain stock of capital, there will be a definite size of the population at

which real income of goods and services *per capita* will be highest. This is the optimum size. The optimum number can therefore be defined as one at which *per capita* income is the highest.

Under-population and over-population. If the population of a country is below the optimum, i.e., below what it ought to be, then the country is said to be *under-populated*. The number of the people will be insufficient to take the fullest possible advantage of the natural and capital resources of the country. Some of the resources will remain untapped and unutilised. There will be less scope for specialisation, and division of labour. Some jobs will lie unattended or only imperfectly attended. The productive schemes of the country will be hampered for want of workers.

This is what happens in a new country. The resources are vast. Much can be produced but there are not men enough to carry on the work of production efficiently. Such a country is obviously under-populated. Any increase in population there, will be most welcome. It will supply a felt want. Increase in numbers will offer more opportunities for specialisation and the resources of the country will be much better exploited. Production will be conducted on a larger scale and the various economies of large scale production will be more fully realised. The large population will supply an adequate market for the goods produced. No industry will suffer from shortage of man-power. Under such conditions increase in population will be followed by an increase in *per capita* income.

But this increase cannot go on indefinitely. When the shortage of man-power has been made up, the *per capita* income will reach the maximum and we shall say that the optimum has been reached.

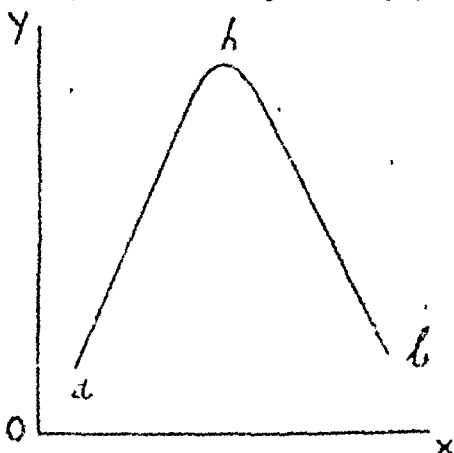
If, however, population still goes on increasing and the optimum is exceeded, then we shall have a state of *over-population*. There will be too many people in the land. There will not be enough jobs for the workers. There will be overcrowding. Too many cooks spoil the broth. Congestion will lead to strife and some resources may be damaged. At any rate the resources will not be sufficient to provide gainful employment to all. They will be thinly spread over the teeming millions. Pressure on the soil will become unbearable. *Per capita* income will diminish; standard of living will be low; war famine and disease will be constant companions of such a people. These are the symptoms of over-population.

We, in India, find ourselves at present in this unenviable position. How can we now get back to the optimum? We must attack the problem at two ends: (i) We must check the growing numbers, i.e., slow down the speed at which we are growing in the matter of numbers; and (ii) we must develop our resources. Ours is a country of utilised or under-utilised resources. The multi-purpose projects, execution of hydro-electric and irrigation

schemes, setting up of new industries, development of means of transport are steps in this direction. When we try to restrict our numbers and maximise our productive capacity, we are on the road to the optimum. Income *per capita* will increase and may attain the maximum. This is how the optimum will be restored.

The following diagram represents the three states (1) under-population ; (2) optimum ; and (3) over-population

We start with *a* (small population). We move up ; the population increases and when we reach *h* it is the optimum. From *a* to *h* it was a state of under-population and increase therein took us to the optimum *h*. Till we reached *h* the income *per capita* was increasing, and at *h* it is the highest ; when we cross *h* the *per capita* income has started falling. We have exceeded the optimum population and we have now over-population. If now we decrease the number, the *per capita* income will increase. ...



Under-population and over-population are relative terms. They are relative to resources. A country is under-populated because the resources are bigger. If the resources had been meagre, the same population would have meant over-population. Similarly, a country is said to be over-populated because its resources are inadequately developed. With a fuller development of resources the phenomenon of over-population may disappear, though there may be no decrease in population. Thus what may be called under-population or over-population under certain circumstances may cease to be so under different circumstances, i.e., when there is a change in the state of the development of the resources. Even a small population may be too large if the resources are inadequate, and a large population may not be considered too much if there is a commensurate development of resources.

Optimum is movable and not fixed. It is not to be thought that for any country, considering its resources, there is a certain fixed optimum and one which will always remain the optimum for that country. The optimum is not rigidly fixed. It advances and recedes according to the increase or decrease of productive resources of the country.

The optimum is not something absolute. It is relative to the resources available. Considering the extent to which the productive

powers of a country have been developed, we might say that today this is the optimum size of its population. But if far-reaching development schemes are undertaken and successfully completed, then it will be in a position to support satisfactorily much larger numbers. The *per capita* income will go up and we shall have a new optimum at a level higher than the previous one.

If, on the other hand, some resources are damaged or destroyed by war or civil commotion, then the present optimum population will become over-population and the new optimum will be at a lower level.

The conditions in every country are dynamic and not static. Changes are always taking place in the technique of production; more modern appliances are being introduced, new processes and new materials are being discovered, capital is continually growing in volume; natural resources are increasingly being harnessed into service. In these circumstances *per capita* income must increase; but population also increases more or less. Hence what we regard the right size of the population today may appear to be under or over-population tomorrow. The optimum thus is constantly changing. It is not to be regarded as a constant factor or a fixed number.

Is it possible to ascertain the optimum? No. It is very difficult to say with respect to any country what is the optimum size of the population for it. The data is always changing. As mentioned above new resources are constantly being tapped. The boundaries of technical knowledge are being constantly pushed forward. The economic forces are seldom stationary. How can we ask them to stay so that we may measure the productive capacity?

To ascertain population is no joke. We know how political prejudices and motives vitiated our population statistics. Thus it is almost impossible to find out the income *per capita*. How can we say when it will be the highest? There is a very large element of conjecture in all such calculations. Various estimates have been made of *per capita* income in India; Rs. 20 by Dada-bhoj Naoroji for 1867-70, Rs. 44 by Professors Wadia and Joshi with regard to 1913-14, Rs. 116 by Findlay Shirraz for 1922, and Rs. 65 by Dr. V. K. R. V. Rao for 1931-32. But more of these estimates commanded universal acceptance. It gave only a mental satisfaction to those who made the calculations. They had little practical importance. Thus the discussion relating to the optimum has only a theoretical or academic interest.

8. Is Increasing Population a Curse? No. Not always. Nor is increasing population always a blessing. The concept of the optimum enables us to understand the movements in population in their proper perspective.

With regard to India Darling once remarked that all blessings of nature or of good government were neutralised by increase in population. India is in fact over-populated. Poverty of which there is no parallel in the world prevails here. The standard of living is incredibly low; the death rate is the highest in the world. The spectre of famine frequently stalks the land which is also disease-ridden. Physically and mentally, *on average*, an Indian is a poor specimen of humanity as compared with, say, an American or an European. All this we owe to our over-flowing population. Over-population is the greatest curse from which we are suffering at present.

But increasing population is not always a curse. A large population facilitates economic co-operation and stimulates production. There is a better scope for division of labour and specialisation. Increasing population provides an ever-expanding market which guarantees safe and profitable investment for capital. We, in India, may start any industry and it can be sure that the goods will command a ready sale. Our teeming millions constitute a limitless market. Further, growing population makes for adaptability of the economic system. Some new industries are always being started or new types of machines are being installed. There is thus the need for new hands having the latest technical skill. The workers of the previous generation will not do. But in the country with ever-increasing population, the new generation is ready to take up new jobs. The productive system suffers no set-back or handicap. It quietly adapts itself to the new changes and the new needs.

But increasing population is desirable only when population is less than the optimum, i.e., when the man-power is not available in such proportions as to make for proper exploitation of the resources of the country. There is, in other words, a shortage of labour. In these circumstances increase in population is welcome because it will lead to an increase in *per capita* income. If the population is in excess of the optimum, then a diminution will be desirable, because it will yield better economic results. -

Which is therefore better, increasing or decreasing population ? It all depends on what is the state of population. If it is less than the optimum increasing population will be better. If it is more than the optimum, then a decrease is desirable. What is needed is a movement towards, and the attainment of, the optimum. We cannot dogmatise and say either that the increasing population is better or decreasing population is better. It depends on the circumstances prevailing in each country.

9. Net Reproduction Rate. To superficial observers it might appear that the rate of increase in population can be ascertained by comparing the birth rate and the death rate. It would seem that the excess of births over deaths represents the net increase in population. For example the birth rate in India is 34.1 per thousand for 1938 and death rate for the same year is 24.3. We may rush to the conclusion that the rate of growth per year is 10

following table shows the method :—

Gross and Net Reproduction Rate in India

Ago Group	Total number of children born per 1000 women passing through each group.	No. of female children born per 1000 women passing through each group	Number of survivors of each 1000 female children born.	Number of surviving women by whom present women replace themselves
1	2	3	4	5
15—20	691.2	332	548.94	182
21—25	1670.2	803	499.37	401
26—30	1556.5	748	447.95	335
31—35	602.2	334	394.38	171
36—40	430.5	207	339.77	70
41—45	188.8	91	285.32	26
46—50	79.9	38	234.01	9
	5512.3	2653	2747.74	1194

Gross reproduction rate is given by Columns 3 showing the number of female children born per 1000 women.

$$\text{It is } \frac{2653}{1000} = 2.65.$$

The net reproduction rate is shown by column 5, i.e., the number of surviving women by whom present women replace themselves. It is $\frac{1194}{1000} = 1.119$. This means that one woman is

replaced by 1.119. Instead of 1000 woman there are left 1196 women. This shows the increasing population.

The gross and net reproduction rates are given per unit and not per 1000 or 100.

The following are the gross and net reproduction rates of some other countries.

Country	Year	Gross	Net
U.S.A.	1935	1.062	0.961
Japan	1937	2.145	1.44
France	1936	1.010	0.88

1. Brij Narain—Indian Economic Problems, Pre-war, War and Post-War, p. 16.

2. Brij Narain—Indian Economic Problems, Pre-war, War and Post-war V. 19.

Ireland	1935-37	1.386	1.162
Netherlands	1937	1.236	1.119
England and Wales	1937	0.883	0.782
Scotland	1938	1.073	0.961
Sweden	1938	0.879	0.783
Switzerland	1940	0.877	0.795

In this table U.S.A., France, England and Wales, Scotland, Sweden and Switzerland have the net reproduction rate as less than 1.0. They represent a declining population. For example in England 782 women survive per 1000. It is an example of most declining population. In other cases it is more than 1.0 which means a growing population.

10. The Qualitative Aspect of Labour—Efficiency. Labour supply of a country is not merely a question of quantity. The quality of labour or its efficiency is as important. In his evidence before the Indian Labour Commission, Sir Alexander McRobert pointed out that an English worker was 3.5 or even four times as efficient as an Indian worker. What is the reason?

11. Factors of Labour Efficiency. There are several factors which explain the relative efficiencies of the workers in different parts of the world or even in different parts of the same country. The following are some of the main factors which affect labour efficiency :—

(1) *Racial Qualities.* Labour efficiency largely depends on heredity and the racial stock to which a worker belongs. The Jat of the border districts of East Punjab is very sturdy, strong and enterprising. The Bengali or a worker from the U.P. is no match for him in physical endurance. They belong to different stocks and exhibit the qualities of their respective stock.

(2) *The Natural and the Climatic Factor.* A cool bracing climate is conducive to hard work, whereas the tropical climate is enervating. Where sustenance has to be wrested from nature by persistent efforts of man, the human stock is superior to that where nature is bountiful. The bounty in nature breeds in man indolence, lethargy and listlessness. Thus the inhabitants of cold and temperate regions, where nature is niggardly, are more hardy and efficient than those of the tropics or sub-tropics.

(3) *Education—Technical and General.* Education stimulates and strengthens right type of instincts and builds up character. There is not the least doubt that an educated worker will be more resourceful and behave in a more responsible manner. A technically trained hand is bound to be more efficient.

(4) *Individual and Personal Qualities.* A worker's efficiency depends upon his personal qualities. If a worker has a stronger physique, mental alertness, intelligence, resourcefulness and initiative and if he is sober and possesses a higher sense of responsibility, he will be more productive. He will need less supervision and

driving. He will not waste time or materials and he will use the machines more carefully. In a word he will be more efficient.

(5) *Industrial Organisation and Equipment.* The level of organisation and the nature of equipment supplied to the workers determine their efficiency. Second-rate entrepreneur using second-hand machinery and third-rate materials cannot turn out first-rate products. Labour efficiency also depends upon the skill and the ability of the manager.

(6) *Factory Environments.* If the surroundings are depressing labour efficiency must be low. Cramped factories, which are ill-ventilated and imperfectly lighted which are situated in crowded cities and which have unclean and insanitary surroundings, cannot call forth the best endeavour on the part of the workers. On the other hand, cheerful and bright environments are conducive to much better work.

(7) *Working Hours.* Efficiency also greatly depends on the number of hours that the workers are called upon to work. Long hours with no suitable pauses and leaving no time for relaxation or recreation, cannot but impair labour efficiency. If the working day is of a shorter duration the worker will put forth better effort.

(8) *Fair and Prompt Payment.* A well-paid worker is generally contented and puts his heart into the job. This is especially so if the wages are promptly and punctually paid. If the workers are not paid well or paid in time, they lose all interest in the job. The job is thus not done well. A good wage will ensure an adequate supply of food, clothing and healthy housing conditions which must improve efficiency.

(9) *Labour Organisation.* An organised effort is always more effective. If labour is properly organised both inside the factory through a proper division of labour and outside in the form of a strong trade union, their efficiency will go up.

(10) *Social and Political Factors.* Social Security Schemes guaranteeing freedom from want and fear, and which remove the dread of unemployment that always hangs over head like Damocle's sword are bound to invest labour with dignity and respect. They will be in a mood to work better and to give their best to the community. Uncertainty about the future is demoralising and detrimental to labour efficiency, optimism and freedom are conducive to labour efficiency.

(11) *Why Indian Labour is less Efficient* It is well to remember that production is a co-operative effort and labour efficiency does not merely depend on personal qualities of the workers. Other factors which are beyond worker's control are more important. The Indian labour is comparatively less efficient not on account of some inherent deficiencies but because of natural, and environmental factors. He lives in enervating climate which gives him a poor physique and the extreme heat and cold render the factory work a great ordeal. The mere pittance that he gets enables him

just to eke out miserable existence. The factory conditions are very depressing and alien to his natural tastes. The work is no pleasure ; it is all drudgery. The entrepreneurial skill and factory equipment are of a low order. Little wonder that he is not very efficient. He is condemned to long hours of work which compel him to snatch leisure somehow. He is illiterate and conservative. Conditions being as they are, it is really surprising that he can even do the amount of work that he is doing.

12. The advantage of an efficient labour. An efficient labour force is a great blessing to a country and a powerful instrument of economic uplift and regeneration. They will not need much supervision and will not waste material or damage machinery. They work more intelligently and show initiative and responsibility. The whole atmosphere will be heartening when cordial co-operation pervades all round. They will be able to take patriotic interest in the industry. Increased output at decreased cost will give a pull to the country in international competition. The Japanese industrial supremacy is largely due to Japanese labour.

13. Mobility of Labour. Efficiency of labour also depends upon mobility of labour which is of four types :—

(a) *Geographical mobility*, i.e., moving from one place to another in the same country or from one country to another. This mobility is difficult. Man ordinarily dreads a change. Differences of language, customs, laws etc. are great deterrents. Nobody likes to move into strange environments for a petty gain.

(b) *Horizontal mobility*. This means mobility between one occupation and another in almost the same level, e.g., a carpenter becomes a blacksmith. This type of mobility is not so difficult, although it is not so easy either.

(c) *Vertical mobility*. This implies a change of occupation from a lower to the higher order, e.g., an ordinary mistri becomes an engineer. Only talented persons are capable of effecting such a mobility.

(d) *Mobility between industries*. This is the easiest provided there is no change in the occupation e.g., a clerk in a sugar factory takes up a clerical job in a cotton mill.

Mobility of labour is very advantageous. If labour in a country has a fair degree of mobility economic adjustments will be easy and smooth. The economic system will not suffer from jolts and jerks which may mean so much human suffering. The consumer's preferences will be readily interpreted. The system will bind and not break under any abnormal pressure. Any economic system which suffers from certain rigidities, e.g., of costs, will be subjected to a severe strain in times of depression and in face of keen foreign competition. Flexibility of the system is a great advantage and mobility of labour is highly conducive to this flexibility.

14. Use of Machinery. Modern age is the age of machinery. Although man always used some sort of tools and implements yet it is quite different today. The machine dominates the man. Machines of enormous strength, of wonderful delicacy and amazing intricacy have taken possession of almost the entire productive system. Mechanisation has gone to lengths undreamt of before. In the coal mines in Germany, from the bottom of the mine to the delivery of the coal at the other end it is untouched by human hand. Man seems to have become almost superfluous.

15. Advantages of the Use of Machinery. Introduction of machinery offers great advantages. The advantages can be traced in the *improvement of the products, the relief to the worker* and in the *general welfare of the community*.

(1) It is only through machinery that man has increased his *mastery over nature*, so that its stupendous forces have been harnessed into the service of humanity. Electricity which is so useful to man has been generated from waterfalls with the aid of machinery.

(2) *Physical limitations of time, space and gravity are fast disappearing.* The sensational discovery of the atomic bomb is likely to bring about a revolution in the world of transport and in every phase of mechanical production. The possibility of journey to the moon is not ruled out.

(3) *Human hands could not work so fast.* A cigarette factory can produce 250,000 cigarettes in a minute. A very ordinary bulb factory in India is making 2,500 bulbs daily. You cannot count the number of pins that can be made by machine. A handworker stands aghast at such speed.

(4) The machine works with *wonderful precision* so that every article turned out is exactly like another. Without such a standardised production and without machines with interchangeable parts modern industrial system would not have achieved anything.

(5) Processes in different industries being very similar, *labour has been given added mobility.* Interconvertibility of industries has been rendered possible. This has been amply demonstrated during the war when the industrial system promptly responded to the call of war.

(6) By the *production of cheap and serviceable articles* and by the extension of transport facilities the community has benefited immensely. Printing of cheap newspapers and books, which has been made possible by machinery, has been an effective means of enlightenment.

(7) *The worker has been relieved of arduous and disagreeable work.* He has got more leisure by the shortening of the working day.

(8) *The level of his intelligence, skill and dexterity has gone up.*

16. Disadvantages of Machinery. But there is the other side too. Congested, dingy and insanitary cities, over-crowded factories with all their attendant dangers to human morals, exploitation of women and

children, loss of independence by the craftsman are some of the by-products of the use of machinery. The craftsman has been reduced to the position of a machine tender. We know to our cost how machine competition from abroad destroyed our indigenous industries and the producers of Dacca muslin swelled the ranks of the unskilled labourers. Man is treated as a mere cog in the machine. *Artistic production has disappeared.* Shoddy and unreliable goods produced for profit have flooded the markets. All the evils of factory system and capitalism are laid at the door of machinery.

17. Does Machinery Create unemployment? How far is machinery responsible for the displacement of labour or unemployment? Luddites destroyed machines on the ground that man would be thrown entirely on the scrap heap. No doubt, the immediate effect of machinery is the displacement of labour. Those who are displaced, especially the old hands, may never get a job and those who do may be able to secure less remunerative employment. To what extent man will be displaced, and for how long will depend on the adaptability of workers and the ability of the entrepreneurs to adjust to the new situation?

Adjustments are sure to be made and ultimately, and in the long run, there will be a much larger volume of employment. Who can doubt that England today provides employment for infinitely larger mass of people than it could do before the industrial system? More employment is created in this way. Machine-made goods are cheaper; demand for them increases and the larger volume of production will reabsorb some people; or demand for some new goods will be created and men will be required to make them. If men do not buy more goods, they will save; capital will accumulate and more industries will be started. Men will be needed for making machines, for repairing them and for doing so many allied jobs. The number of new openings created by machines really passes one's imagination.

18. Division of Labour. *What it is?* Besides the extensive use of machinery discussed above, another outstanding feature of modern production is the division of labour. As a matter of fact division of labour and the use of machinery go hand in hand. One leads to the other. We find today that the making of an article is split up into several processes and each process is carried out by a separate group of workers.

The processes may be further split up into sub-processes. Making of cloth, for example, is divided into spinning, sizing, weaving, finishing, etc., to take only the chief processes. This splitting up of the process of manufacture is known in Economics as division of labour. Thus it is a traditional term, specialisation of labour seems to be more appropriate.

19. Stages of Division of Labour. Division of Labour has developed by following stages:—

I Stage—Division into occupations. Carpenter, weaver, blacksmith,

etc. Each craftsman made a complete article and worked independently on his own account. He was his own employer.

II Stage—Division into industries. The worker no longer works in his home but works in the factory instead. However, he still does the whole job. Instead of making the chair at home buying his own raw materials he now works in a furniture factory with raw materials, supplied by the factory owner. But he makes the whole chair.

III. Stage—Division into complete processes. For example making of cloth is split up into spinning, weaving, finishing, etc.

IV. Stage—Division into Incomplete processes. At this stage each of the processes (say spinning or weaving) is further split up into part processes. Division of labour has become at this stage very minute.

20. Kinds of Division of Labour. 1. *Simple Division of Labour.* It means the doing of a big job (say lifting a heavy load) by the combined effort of a number of men. Each man alone will not be able to do it. The job is not split up into parts.

2. *Complex Division of Labour.* This is division of labour proper. The job is split up into different processes and each process is done by a separate group of workers.

3. *Territorial or Geographical Division of Labour.* It is division of labour by territories. A particular territory or a locality comes to specialise in a certain industry, e.g., hosiery industry at Ludhiana.

We discuss the problem of localisation of industry, its advantages and disadvantages, etc., in Chapter X (?) on Agents of Production—Organisation.

21. Advantages of Division of Labour. Several advantages are claimed for the system of division of labour. Adam Smith's contribution to this part of the economic theory is still regarded as classic. Division of labour has proved beneficial in the following ways—

• (1) *Increase in Productivity.* Adam Smith takes the example of the pin-making industry to illustrate the immense increase in productivity. He describes pin-making as divided into 18 distinct operations. Ten men can make 48,000 pins in a day; one worker may therefore be considered to have made 4,800 pins in a day. In the absence of division of labour and machinery, one man could scarcely have made one pin in a day and certainly not twenty. There is no doubt that the productive capacity of the community is immeasurably greater today than ever it was.

Is increase in productivity due simply to division of labour? That the system of division of labour has vastly increased the productive capacity of the community, there cannot be the least doubt. But it is wrong to attribute the entire increase in productivity to division of labour to the neglect of other contributory causes. The advancement of technical knowledge, various inventions and discoveries and the accumulation of capital are the other important

factors which have added to the productive capacity of the community. Science has enhanced the productive capacity of land, education has improved the quality of the human factor. All have combined to increase productivity. Without such an increase in productive capacity, as Benham says, 'a fraction of the present population could exist and that fraction at a very low standard of living.' Increase in productivity is not entirely due to division of labour.

✓ (2) *Increase in dexterity and skill.* Practice makes a man perfect. After repetitive performance of the same task, a worker becomes an expert and there is instinctive co-ordination of the muscle and the mind. The worker acquires an aptitude for the job if he had it not already. He becomes more skilled and acquires greater dexterity.

✓ (3) *Inventions are facilitated.* The movement becomes mechanical. The worker's entire thought is not absorbed in his job. He can freely think how to do it still better. New ideas often occur and the worker is able to make some inventions. Division of labour gives experience and experience leads to invention.

✓ (4) *Introduction of machinery facilitated.* When a man is doing the same job over and over again, he will be able to think out how he can get himself relieved by the use of some mechanical contrivance. Division of labour reduces each process to a simple movement which has to be repeated. A machine is bound to take over this simple movement sooner or later. Division of labour thus serves as a stepping stone towards the introduction of machinery.

✓ (5) *Saving in time.* Under the system of division of labour, a worker has only to do one process or a part of a process. Less time is needed to learn a specialised trade than will be needed in learning the whole trade. But the worker becomes a specialist and commands a higher price for his services.

✓ (6) *Saving in tools and implements.* When a worker has to perform a part job only, e.g., making the legs of a chair, he need not be supplied with a complete set of tools. Thus one set of tools can serve many workers at the same time. If, on the other hand a carpenter has to make a complete chair then he will require all the tools but he will not be using them all continuously. Some of them will remain idle. This means a loss of capital. Thus the system of division of labour is economical from the point of view of tools and appliances.

✓ (7) *Diversity of employment.* Division of labour increases the number and variety of jobs, employment is diversified and the mass of the workers have got a wider choice of jobs, so that each worker gradually gravitates to the work for which he has got an aptitude.

✓ (8) *Large-scale production.* Division of labour involves production on a large-scale. The community reaps all the economies of large-scale production. Cheaper goods are placed at the service of

the community and the standard of living and comfort improves.

Production improves not only in quantity but also in quality because under division of labour goods are made by workers who are experts, *i.e.*, who have been made perfect by practice.

✓ (9) *Right man in the right place.* Under division of labour workers are so distributed among the various jobs that each worker is put in the right place. There are no round pegs in square holes. When right men are placed in the right place, high efficiency is assured.

Division of labour is thus highly beneficial to the community. We may conclude in the words of Adam Smith, "it is the great multiplication of the productions of all different arts in consequence of the division of labour, which occasions in well governed society that universal opulence which extends itself to the lowest ranks of the people."¹

22. Disadvantages of Division of Labour. We have seen division of labour enhances the productive capacity of the community. But as Chapman puts it, "productiveness of a method of production is not the sole test of its value—to get many commodities is not the only end in life." We have rather to see how man, for whom production is meant, has been affected by the division of labour. Considered in this light, it has not proved to be an unmixed blessing. The following may be mentioned as some of the disadvantages of labour :—

(1) *Monotony.* Under division of labour a worker has to do the same job over and over again. The work becomes monotonous and tedious and is devoid of all pleasure. It is drudgery, pure and simple. Variety is the spice of life but this variety the system of division of labour denies to the worker.

(2) *Retards human development.* A person's development, physical and mental, is greatly affected by the job he is engaged in. An agriculturist is sturdy and strong and a shop-keeper or *halwai* has peculiar contours in his body but is mentally much more alert than the peasant who is conservative and whose mind works slowly. Under division of labour, a worker has to repeat the same movement. His muscles and mind move in the same direction. The narrowing effect of the job on the physical and mental development of the worker cannot be ignored. The development of the body and the mind is retarded. Repetitive movement cramps a person's mind and narrows his outlook. Monotony is soul-killing. Charlie Chaplin's picture 'Modern Times' may be considered quite a fair representation of the adverse effects of the division of labour on workers.

(3) *Industry de-humanised.* Under division of labour a worker is engaged in making only a part of a thing, say legs of the chair. Different parts of the chair are made by different sets of people. If it turns out to be unsatisfactory, no one will own responsibility.

1. Adam Smith—An Inquiry into the Nature and Causes of the Wealth of Nations Annotated by Mc Culluch, p. 26.

'Everybody's business is nobody's business.' The making of a complete article gives pleasure to the maker. He takes pride in it. It satisfies his creative instinct. The article expresses the personality of the maker. But all these things are impossible under division of labour. The worker loses all sense of responsibility and pride in his work. Human touch is gone. The industry is thus dehumanised.

✓ (4) *Loss of skill.* The master craftsman loses his skill. He knows only either spinning or weaving, making the legs of the chair or its seat; he does not know how to make the whole chair. This is a great loss. The workers are unaware of the complete processes. They are just semi skilled, knowing only a part of the job.

✓ (5) *Risk of unemployment.* Knowing only a part of the job the worker is in the danger of becoming unemployable. He knows only to make the legs of the chair. If he happens to lose his present job he may not be able to get employment elsewhere, for there may be no vacancy in the particular job that he knows. If he knew the making of the whole chair his chances of getting employment will be brighter. Too much specialisation is thus bad from the point of view of mobility of labour.

✓ (6) *Disrupts family life.* Division of labour facilitates employment of women and children, for there are jobs for all types of workers, strong and weak. The influx of women into the factory disrupts domestic life and the employment of children involves the wastage and deterioration of valuable human resources of the nation.

(7) *Division of labour and the evils of the factory system.* Division of labour is associated with the factory system which has given rise to many evils. The countryside is contaminated with the foul smell; overcrowding endangers morals; insanitary surroundings spread disease. Man becomes a slave of machine and of the factory owner.

✓ (8) *Evils of territorial division of labour.* Territorial division of labour has disadvantages of its own. It leads to localisation of industries, which brings about too much dependence of a locality on some particular industry. It narrows the field of employment and brings down the average of the family income.

23 Conclusion. Division of labour has, however, come to stay. Shortening of the working day and thus increasing leisure and diffusion of education and raising of remuneration are some of the measures that can be adopted to counteract the bad effects of division of labour on worker's life and personality.

Does it mean that under the system of division of labour, a worker is put on the work for which he is best fitted? Not necessarily. The employer, of course, makes every effort to fit in every person in the job for which he is best fitted. But it may not be always possible. It all depends on demand. No worker is so specialised as not be

able to do anything else. Of the several alternative jobs that he may be able to do, he will get one for which demand exists and this may not happen to be his best.

24. Requisites of Division of Labour. If division of labour is to be satisfactorily carried out certain conditions must be fulfilled.

(1) *Large-scale production.* Unless production is on a large scale division of labour will be impossible. There will be some sense in putting one group of workers on making legs of the chairs and the other backs; etc., if a very large number of chairs have to be made.

(2) *Production must be continuous.* Unless production is continuous and all processes are simultaneously carried on the work of different groups of workers will not be properly co-ordinated.

(3) *Spirit of co-operation and intelligence.* Unless the workers can co-operate with one another and have the intelligence to understand the various aspects of the job, division of labour will not be a success.

(4) *Organising ability of entrepreneur.* The entrepreneur must have the requisite organising ability otherwise division of labour cannot be properly arranged or organised.

(5) *Extent of the market.* Finally the limiting factor is the extent of the market. We discuss it in the next section.

25. Division of Labour is Limited by Market. This is so obvious: If the shoemaker is able to dispose of one shoe in six months, it will look foolish if he sets half a dozen persons on the making of soles, half a dozen on the making of uppers and another six persons in joining them. There must be demand for his product before he can adopt such methods. Division of labour implies large-scale production and it is meaningless to produce more in the absence of a market for goods. Market must either be there or it must be created for goods produced under the system of division of labour. The limiting factor for the introduction and extension of labour is, therefore, the existence of a wide market.

But no individual entrepreneur looks at the matter like this. He considers the market while fixing the size of his plant and when he has done that the extent of the division of labour will depend on the nature of the machinery installed and the number and variety of the people employed. It will depend also on entrepreneur's own organising ability. The human limitations of the division of labour seems to be more important.

Market also depends on division of labour. Under division of labour production is done on a large scale which means cheaper production. When goods are cheap more people will buy them. Thus the boundaries of the market are extended. Thus division of labour and market are interdependent. But it is more true to say that division of labour is limited by the extent of the market.

CHAPTER IX

AGENTS OF PRODUCTION—CAPITAL

Importance of Capital. Capital plays a vital role in the modern productive system. As a matter of fact production is unthinkable without capital. Can you think of agriculture without the plough, or flour without the flour mill, or ice without the ice factory? Even in the most primitive society some tools and implements have always existed. They have assisted the primitive man in the work of production.

Capital consists of tools and appliances and machinery, of raw material and of cash for payment of wages and other incidental expenses. All these things are absolutely essential in production. Without them production on any scale and of any type is impossible.

Adequate and suitable supply of capital can aid in producing things on a large scale and things of the right quality. The wide range of modern production as well as the mass scale on which it is carried on is all due to the help that production receives from capital.

Standard of living can be maintained and improved if nation has, at its command, sufficient amount of capital. Indian masses are inexpressibly poor and their standard of living is incredibly low because we have got insufficient capital.

Economic development in any direction needs capital goods. If India is to be made self-sufficient, we must have machinery, to carry out irrigation projects, tube-well machinery, tractors, etc. Machinery is also needed to accelerate industrial development.

Vast areas in India of culturable waste can be brought under cultivation provided we can get the requisite machinery, like bulldozers. Machinery is also needed to construct roads. Thus it is impossible to advance economically without capital.

We cannot even provide adequate defence without capital. America is rich and has abundance of capital. She can have army, navy and air force which can be the terror of the world. What can a poor country like India do?

In the absence of capital land will lie barren, labour will remain idle and organisers will be seriously hampered in their productive enterprises. Capital oils the wheels of the productive machine. Thus the role that capital plays in production cannot possibly be over-emphasised.

1. The Nature and Meaning of Capital. Widely different views are held by economists about the concept of the term capital. As Chapman remarks the term 'is current in distractingly discordant,

goods have reached the consumers, yet the matter is not finished. They will still continue to yield a flow of service for many years as in the case of durable goods like houses, furniture, radio sets, cars, etc. It is for these services that these goods are valued. Also, that some further transactions are still possible. One may decide to let out his house or use his car as a taxi. To Benham it seems odd that a doctor's car should be regarded as capital when he goes to visit a patient and not capital when it is used for the family for an outing. He would, therefore, regard all these goods as capital. Anomalies like the above are bound to arise. But it is not difficult to know whether a good is primarily meant for getting an income or not. In the former case we can put it in the category of capital.

2. Some Doubtful Cases. Is land capital? Land is not regarded as capital because (a) land is a free gift of nature but capital is man-made or is a 'produced' agent of production; (b) capital is perishable whereas land is indestructible and permanent, (c) capital is mobile but land has no mobility; (d) the amount of capital can be increased but the quantity of land is fixed and limited; (e) income from capital is uniform, whereas that from land varies.

But these differences are exaggerated. Some of these are superficial. Land alone is not a gift of nature but other factors, too, at any rate in their original form, are natural gifts. A very important element of land is also man-made. The human factor has turned deserts into fertile lands through irrigation and other land improvement schemes. The land of man is as visible as that of God. Like capital land is also perishable to some extent, for repeated cropping destroys its productivity. We may not be able to increase the land surface but we can increase its productivity. It is just like increasing the area. Land is also mobile in the sense that the products of land can be transported from one place to another. As for the incomes we might say that land or capital of same value brings the same income. It would be more logical to regard land as capital from the individual point of view. The difference between the two is not of kind but of degree only.

But although peculiarities of land may be exaggerated, yet the fact remains that land is not the same thing as capital. There are some fundamental differences which make capital a distinct factor of production.

(1) Land is permanently limited. Its quantity can never be increased; other things like capital are fixed only temporarily; and

(2) Economic progress reacts on land in a different manner. As the community progresses economically and advances in civilisation, other things become cheaper. For example, rate of interest falls; the rate of profit also falls. Both capital and entrepreneurial service become cheaper but rent rises, i.e., the value of the service of land increases.

(a) **Is money capital?** In an exchange economy all capital must take a monetary form. But whereas all capital may be money, all

money is not capital. Before money can become capital, it must be invested and used for production purposes. Money must be spent in the purchase of machinery, materials and other resources and used in hiring of labour. Then it will indeed be capital for it is then used in production. Rs. 500 lying in a cash box are not capital. If they are spent on son's marriage or on building a house they are not capital, though they may be wealth. All capital is wealth but all wealth is not capital. Unless money becomes a source of income or an agent in producing further wealth it cannot be capital.

What about capital of a joint-stock company or capital value of National Debt? From the point of view of the shareholder or stock holder they are certainly capital, because, they yield an income. But from the point of view of the company or the government, they represent a debt. To the extent that company's capital is invested in machines, land building, furniture, etc., or national capital in roads, railways, canals or other income-yielding assets they are capital. But if the national loan has been spent in war, i.e., for destructive purposes, it cannot be truly called capital.

(b) Are personal qualities like a surgeon's skill or a typist's dexterity capital? No. We have already excluded these qualities from the category of wealth on the ground of not being transferable. It is argued that if a man invests Rs. 2,000/- in learning dentistry and similar amount on dentist's equipment, why should one be regarded as capital and the other, not? A pertinent question. Adam Smith says, "The improved dexterity of a workman may be considered in the same light as a machine or instrument of trade which facilitates and abridges labour and repays the expense with a profit." But there are good reasons for distinguishing between the dead equipment and the living conscious person. Some economists are prepared to get it a courtesy title of personal capital.

(c) What about the free agents like rivers and mountains? Again, it seems illogical to regard canal as capital and exclude the rivers from this category, although rivers may be more useful. Here again we depart from logic and tread the path of convenience. Such things are not capital in the accepted sense, because capital refers to 'produced' agents of production. They are, however, sometimes called natural capital.

(d) Is all wealth capital? There is another view of capital, a very wide one. It regards *all wealth capital* on the ground that everything that a man possesses does directly or indirectly exercise some influence on the production of wealth. If, for example, a man's house got accidentally burnt up, he will have to build. For this purpose he will have to divert productive resources from other directions and his income is bound to be adversely affected. Anything the presence of which helps in production and absence of it retards it, must obviously be regarded as capital. There is another argument to support this view. Everything yields a flow of satisfaction, i.e., income, and hence everything must be regarded as capital.

Power to save in the case of an individual depends on the surplus of income over expenditure. In the case of a nation it depends on the efficient organisation of trade and industry, development of means of communication and transportation and the gearing up of the credit and banking machinery. Fulllest exploitation of natural resources and the highest development of the human resources through a sound system of education and public health cannot fail to exert their influence in augmenting the capital resources of the country.

The will to save depends on the various motives which actuate human beings to save, e. g., family affection, the desire to rise in the estimation of one's fellow beings and to acquire social and political influence or merely the desire to win success, the relative importance attached to present and future gratification, etc. Some persons by nature discount the future at a heavy rate and with others saving has become almost instinctive.

The security of life and property provided by a stable government strengthens both the will and the power to save, so also the various channels of investment e.g., banks, insurance companies, existence of sound commercial enterprises, the issue of government securities, etc.

High rate of interest also acts as a powerful lever for saving. Many more people are induced to save and the stream of saving secures numerous tributaries. But the influence of rate of interest is exaggerated. Not many who save really think of the rate of interest. On the contrary, some people who wish to provide for a fixed income for themselves in old age or for their dependants, would save more when the rate of interest is low and *vice versa*.

What is the effect of social legislation like social insurance and old-age pensions on saving? Possibly the workers may feel so secure that the edge of desire to save is blunted. But we believe that the urge for saving is quite deep-rooted, and people always save if they can. Even if the workers do not save directly and they spend more on themselves, this will enrich the human capital, improve efficiency and will add to the productive capacity of the nation.

Saving is no doubt the source of capital. As Adam Smith remarks, 'Capitals are increased by parsimony and diminished by prodigality'. But it will be appreciated that *mere saving is not enough*. An Indian peasant saves and buries the saving under the earth. These savings are inert and dead and no capital. In order to turn saving into capital a further step is necessary, i.e., investment.

6. Saving versus Spending. *If a nation saved the entire surplus over the minimum consumption, will it aid or retard production?* Most probably it would hamper production. Too much saving would mean investment in producer's goods and less demand for consumer's goods. It will inevitably lead to over-production and depression. Too much spending, on the other hand, will lead to

raising of the standard of living now without making provision for the future. Most of the money will be spent on consumer's goods. The production or replacement of producer's goods will be neglected to the detriment of productive capacity of the country. Saving and spending both stimulate production. Spending serves as a better indicator of the direction of productive activity but saving turned to capital may lead to misdirected enterprise. Saving takes away purchasing power from the rich and possession to the workers thus increasing demand for necessities and curtailing demand for luxuries.

✓ **7. Classification of Capital.** The following are the main forms of capital :-

Private or Individual capital. Capital owned by an individual is called private or individual capital, e.g., his factory, buildings, professional equipment, etc.

Social Capital—Instruments of production or sources of income owned by the society or community collectively or in common is called social or communal capital, e.g., state railway, irrigation works, hydro-electric works or government factories.

National Capital. It is the sum total of the capital of all individuals in the nation, their mutual debts being ignored. It is total capital of the nation as a whole. Besides the aggregate of the capital of all individuals in the country, it includes also the social capital, i.e., the income-yielding assets owned by the state or by the community collectively.

Personal Capital. It refers to personal qualities of the people engaged in production, e.g., skill, dexterity, intelligence, etc. They are really not capital, because they are not wealth. They are not transferable.

Material Capital—It stands for land, building, machinery, etc., which are material or tangible instruments of production.

Consumption or Consumer's Capital—It refers to food, clothing, shelter and other means of subsistence provided to the workers while they are engaged in the work of production.

Production Capital. It includes machinery, tools and appliances used in production.

Revenue or Lucrative Capital. It refers to that part of a man's wealth which yields an income.

Loanable Capital. It means the fund which can be advanced for productive purposes, e.g., bank balance.

Business Capital of an individual consists of the money that he has invested in his business. It includes money spent on plant and machinery known as producer's goods as well as on those of his con-

sumer's goods from which he may be getting an income by hiring them out.

Fixed Capital. It consists of durable producers' goods like factory building, plant and machinery which are fixed up permanently and give a service for a number of years continuously. In the case of a farmer, besides agricultural machinery and buildings it includes improvement of land in drainage, cleaning and manuring.

Circulating Capital. As distinguished from fixed capital, circulating capital is not of a lasting nature. It is finished up in a single process and serves the purpose but once. It consists of raw materials used in production, e. g., leather in the making of shoes, or seeds which can be used only once. According to Adam Smith the implements of agriculture are fixed capital and money used on paying wages and maintenance of labour is circulating capital. The live stock used in agriculture is fixed, its maintenance is circulating capital. But the stock reared for sale is circulating capital. Cattle kept for dairy purposes is fixed capital. The same thing may be fixed capital for one man and circulating for another. The sewing machine from the sale of which the company gets profit is circulating capital but to a tailor it is fixed capital.

Industrial capital consists of producer's goods, raw materials and consumer's goods in unfinished state and things primarily used as consumer's goods. Consumer's goods in the hands of the consumers are not included nor those things which are primarily used as such and only incidentally as producer's goods. Opinion is divided whether consumer's goods in the hands of producers should be included under this head or not.

Auxiliary capital includes fixed capital as defined above and also the stock of raw materials. The proportion between auxiliary and remuneratory capital depends on (1) nature of business, (2) relative cost of labour and capital, and (3) technique of production.

Sunk capital is the capital which has become specific or specialised and is not capable of being put to alternative uses, e. g., capital invested in an ice factory cannot be used say for a hosiery mill.

Floating capital is in a form that is capable of being used for several purposes, e. g., money, fuel and raw materials.

Remuneratory capital consists of money or bank balance used or making payments to workers.

Working capital means cash which a business man uses in running his business and meeting all the incidental expenses, i.e., paying wages, buying material, etc.

It will be apparent that several of these classifications overlap and only a few of them are of fundamental economic significance.

8. Services or Functions of Capital. From the classification of capital given above some idea can be had as to what functions capital is expected to discharge in modern production. Capital is at the service of the entrepreneur.

He utilises it, *in the first place*, for the purchase of instruments of production like the tools and the machines and also for the erection of factory buildings.

Secondly, the entrepreneur provides himself, by the aid of capital he owns, with the necessary raw materials to be used in the manufacture of finished goods.

Finally, capital is also used in providing means of subsistence, i. e., consumer's goods for all those who are actually engaged in the work of production.

Adam Smith mentions four ways in which capital is employed (a) in procuring the 'rude' (raw) produce annually required, (b) in manufacturing the 'rude' produce, (c) in transporting the two; and (d) in dividing the two in suitable parcels for despatch to those who want things.

The point need not be laboured that all these functions are so indispensable that production without capital today must come to a standstill. A nation without capital must be a nation condemned to irreparable misery and poverty.

9. Capital : its Consumption and Maintenance. A prodigal who discounts the future at a heavy rate lives beyond his means. He sells his land or house and buys consumer's goods to enjoy himself. He may then come down to household furniture and utensils and consume them too. Such a man will be said to be 'living on his capital.' He has been consuming capital. He neglects to save altogether to replace his old live-stock and worn out implements if he is a farmer, shop equipment if he is a shopkeeper and depreciated plant and machinery if he is a manufacturer. He has been able to live well, but at what cost ? He has not provided for the future and he is consuming what he has. Not only he spends what he earns but he even fritters away his past savings. Soon he will come to the end of the tether and sink into abject indigence. He could live in grand style only temporarily.

In the same way a nation can temporarily raise its standard of living by the consumption of its capital. It may devote all its labour and capital to the production of goods of the first order affording direct gratification and neglect all repairs, renewals and replacement of the capital goods and permanent equipment like railways, shops, factories, and buildings. In course of time they will become all unserviceable. The capital of the community, the accumulated outcome of effort and sacrifice of centuries, will have disappeared. The 'community will awake after a short spell of prosperity and high standard of living and find itself reverted to primitive conditions with a standard of living unspeakably low.' This is the consequence of consuming capital. Every country has been consuming capital during the war, for the creation of new capital assets and replacement and repairing of old ones have been almost neglected.

It is, therefore, extremely necessary that the capital must be maintained intact and what Pignon calls 'physical deterioration of capital' made good. After a lapse of time plant and machinery, buildings, farm equipment and transport equipment, must inevitably wear out and depreciate. If the productive activity of the community is not to come to a standstill, regular repairs must be done to this equipment and worn out parts replaced or renewed, otherwise the capital of the community will not remain intact.

But it should be clearly understood that maintaining capital intact does not mean replacing the obsolete and worn out machinery by new machinery of exactly the same design. The world is daily changing; the horizon of technical knowledge is being ever widened and the tastes of the people too do not remain the same. When the old car becomes useless it will be replaced by one of a new model. If road transport extends, much of the railway equipment will be allowed to lapse; it will not be renewed at all and instead the road transport equipment will be created. If the people do not like gramophones, then it will be idle to renew gramophone factory equipment. The wireless-set factories will take their place. Thus maintaining capital intact implies repairs and renewals of some equipment and replacement of some equipment by an entirely new one. The consideration is to provide to the consumers at least the same aggregate satisfaction. In the words of Benham, 'In general, capital is maintained in tact if, given the co-operating factors, the output of consumer's goods which it helps to produce in any period is regarded by consumers as yielding them equivalent satisfaction by the output of any other period.'¹

10. Round-about Production. The longest way home really turns out to be the shortest way. The modern capitalistic production is said to be a round-about one. More factors of production are devoted to the production of instruments of production which will be later used in turning out articles for direct consumption. A very small proportion of the people seems to be engaged in the production of consumer's goods. The primitive hunter just picked up a stone or a stick and killed his game. But, as Chapman says, the huntsman of today begins his hunt, so to speak, by mining ore which he afterwards smelts and shapes it into weapons of the chase.

To bridge the gap between the application of the factors of production to the creation of instruments of production and their final use in the making of consumer's goods, a constant and sufficient flow of subsistence goods is essential, so that the workers are fed and clothed while they are engaged either in the making of instruments or the consumer's goods.

There is no special charm in the adoption of the roundabout methods. The reasons are technical. Roundabout methods are

1. Benham—*Economics*, 1940, p. 149.

2. For detailed discussion of the subject the reader is referred to Erich Roll—*Elements of Economic Theory*, 1937, pp. 179-190.

productive and make a better contribution to the satisfaction of the community. The standard of living has been vastly improved by the use of indirect or roundabout methods of production.

Methods are not always roundabout. Inventions and discoveries do often take place which succeed in abridging and shortening the productive process. Modern production is called roundabout because more effort is being exerted on the production of producer's goods, which in their turn will produce consumer's goods. Mere roundaboutness is no special qualification. The roundabout process may not be the more economical but it is generally found that the roundabout methods are economical. As Chapman remarks, 'A process is not more economical because it is more roundabout. But it happens that the more economical ways of doing things are frequently the more roundabout.' Dr. Hayek compares the capitalistic method to "a fan which opens and closes as the methods employed are more or less capitalistic and clearly the more the fan opens, the greater the interval of time between the placing of the raw materials and the marketing of the final product.'

Select References

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CHAPTER X

AGENTS OF PRODUCTION—ORGANISATION

Role of the entrepreneur

1. Introduction. No factor of production alone can produce anything. Land left to itself may grow something but that something may be considered negligible in view of the magnitude of modern requirements. Labour of to day has got only limbs to offer, and capital is a lifeless matter. They are, besides, to be found today lying isolated, scattered and divorced from one another. Somebody is needed to bring them together and harness them for use in production. This work in modern times is performed by one who is called an *Entrepreneur*, a French word fully expressive of the meaning intended to be conveyed.

In the earlier stage of economic evolution, the independent worker owned his own land or working place, supplied his own capital, worked with his own tools, planned the operations himself, and stood by the result of the venture. He was in short the landlord, the labourer, the capitalist and the entrepreneur all rolled in one. But considering the intricacy and the scale of production today and the nature and magnitude of problems involved in modern production, undertaking of all these responsibilities by one man would be sheer madness.

2. Emergence of the Entrepreneur and His Functions. In these days of specialisation a new specialist has made his appearance. He specialises in the work of organisation. He may own no land of his own and probably no capital, and he will not be expected to labour in the ordinary sense of the term. He possesses one thing, i. e., organising ability and business acumen. He will be able to get land on rent, borrow or raise capital and hire labour and put them all in an effective combination. He makes them work in perfect harmony using each factor in the right proportion so as to yield the best results.

The part of the entrepreneur consists in co-ordinating and correlating the other factors of production. He organises the work, starts and supervises it and faces the issue. He undertakes to remunerate all the factors of production : to pay rent to the landlord, interest to capitalist, and wages to labour, and pays them as production goes on in advance of the sale of goods. The residue, if any, is his. Nothing may be left after he has made the necessary payments, then his venture has been miscarried, or it may leave a handsome surplus. Whatever may be the outcome he must shoulder the risk.

Everything depends on entrepreneur's foresight. The intelligent entrepreneur knows that he will make the maximum of profits if he has been able to give to the consumers the maximum of satisfaction. If he has anticipated the consumer's wishes right, he is

amply rewarded. Thus *organising* and *risk-taking* or 'uncertainty bearing, as it is sometimes called, are the two chief functions of the modern entrepreneur.

3. His Problems. Diverse and difficult are the problems that the entrepreneur has to tackle in the discharge of his functions. He must decide first of all which industry he should enter. He must look ahead and select an industry which is likely to expand and which, being new, offers better rewards. The size of the firm, the size which he can efficiently control, receives his attention next. Having selected the industry and brought the firm into existence, he must locate his factory in a suitable place based on the consideration of the availability of factors and transport relations with regard to markets and materials. The size having been decided upon, he must then wrack his brain over the size, design and make of his plant, get it installed, buy the materials, recruit the labour force and deploy it most economically, and thus set the productive machinery in motion.

Hundreds of problems present themselves every day for his decision and one wrong decision may spell his ruin. The quality and the quantity of output has also to be fixed and effective marketing organisation evolved. It is indeed a super-human task.

4. Essential Qualities of a Good Entrepreneur. A successful entrepreneur must have tact, patience, sagacity, powers of observation and discrimination, be a good judge of human nature and possess qualities of leadership. It indeed needs a rare combination of qualities of head and heart which will make a successful captain of industry. There are not many Birlas, Dalmias, Tatas and Thapars in India.

5. Is he an Architect of his own Fate ? But we should not commit the mistake of thinking that the entire productive machinery is consciously directed. It is the output of multitudinous decisions of innumerable entrepreneurs like himself. He finds himself at the mercy of economic forces and is not much of an architect of his own fate. The economic structure at any moment is full of mal-adjustments. There are always jolts and jerks putting the factors in proper positions tending to make for an efficient organisation and thus restoring the balance. The entrepreneur assumes the lead but cannot always have his own way.

6. Problems of the Entrepreneur. It has already been hinted what problems the entrepreneur has generally to face. His decisions mainly centre round the selection of an industry, the size of the firm and the plant, the nature of the output, etc. Now a word about each.

I The student should carefully understand the difference between these terms. The plant is the unit of production, say, a factory or farm. The firm or company may be an individual, refers to the unit of ownership. One firm may control several plants. Andrew Yule & Co., Calcutta manages 54 different concerns. All the firms in a line go to make up an industry. Sugar industry is composed of all the sugar companies, Karam Chaud Thapar & Bros. is a firm. They own several factories called the plants and they are members of several industries, e.g. coal mining industry or paper industry or sugar industry etc.

7. Industry. This is the first and the foremost question. The entrepreneur must distinguish between an expanding industry and a contracting one. A comparative survey of the various existing industries will help him to come to a correct conclusion. A study of reference books like the *Investor's Year Book* or the *Bombay Stock Exchange Year Book* will enable him to know and compare the dividend earning capacity of the various industries. But it must not be understood that the decision made once on the point is irrevocable. In case he finds that he has committed an error of judgment, the labour capital can be diverted to some other industry, although some loss will be inevitable. The entrepreneur may decide to extend an existing industry or take up entirely a new one.

8. The Problem of the Firm. The entrepreneur has to evolve a most suitable size of the firm. The larger the firm the bigger, generally, will be the profits. There are several economies of large scale production. The entrepreneur will, therefore, be tempted to expand his business as much as he can. *What limits the expansion of business unit?*

For expanding a business the entrepreneur needs fresh supplies of capital and it may not always be an easy affair to arrange for more capital. But the difficulty, however, is not insurmountable. A successful business man who has got reputation for honesty and efficiency will find capital forthcoming. People will be willing to lend money to him. Finance, it is said, is a mere camp-follower and what is physically possible is said to be financially possible. Several of his requirements he can arrange to buy on credit. Capital is, therefore, not much of a hindrance in the way of expanding the business.

But there are other difficulties and more formidable ones. As business is expanded, prices of factors of production will rise; more may have to be paid in the form of rent, wages and interest to attract additional supplies of factors. The costs will, therefore, rise. On the other hand, additional output may depress the price in the market. The costs will sooner or later overtake the income. He will go on expanding till the marginal revenue (additional income from the additional output) exceeds the marginal costs (additional costs on account of producing the additional output). *The limit of expansion will reach when the marginal cost is equal to marginal revenue.* By stopping short he will not get the maximum profit and by going beyond he will lose. This is a hurdle that the entrepreneur cannot cross.

The highest hurdle comes from the human factor-itself, i.e., the entrepreneur's own capacity to manage the business. Entrepreneurs of greater calibre can certainly manage bigger business. The business cannot be expanded indefinitely. A point will be reached when the entrepreneur will find that his business has become unwieldy and grown to unmanageable limits.

Supervision will then become ineffective. Safeguards against fraud will add to the cost. Internal-economies will gradually

disappear and profits will change into losses. This is in keeping with the Law of Diminishing Returns which says that when a constant factor in (it is case managerial ability) is combined with variable factors, diminishing returns will ensue. The business unit is said to be a function of the entrepreneurial ability.

Why a small business is able to hold its own. There are several [other considerations which limit the size. When the demand for a commodity is small, fitful and fluctuating, expansion of business is inadvisable. The unit in extractive industries like agriculture is comparatively smaller than that in the manufacturing industries and so also in trades like repairing, dress-making, jewellery-making, etc., where individual tastes count and standardisation is not possible. When the articles are bulky like the bricks and cannot stand transport, the unit of business must be smaller.

Besides, the small producer in modern times has been helped to hold his own against the big producer by development like electricity, co-operative movement and dissemination of scientific and technical knowledge through the trade journals and magazines. Such knowledge is no longer the monopoly of the big business. In these circumstances the producer has not much inducement to expand his business.

9. Problem of the Plant. What should be the size of the plant or the factory? The term plant refers to the producing unit as distinguished from the firm which means the unit of ownership and control. Just as there is an optimum size of the firm so also there is an optimum size of the plant. Partly, the size of the firm will depend on the size of the plant. The bigger the plant, the bigger generally, will be the firm so what has been said about the considerations governing the size of the firm will be applicable here too.

We have already seen that much depends on demand. When the demand is limited, a bigger plant cannot be installed with profit. The individualised nature of demand will also act as a limiting factor, e.g., a tailoring firm, a restaurant, etc., must be a small unit. When the industry is such that proximity to consumers is essential to understand their tastes and personally attend to their satisfaction the plant will be of a comparatively smaller size. Lack of portability, too, imposes a limit on the size of the plant, e. g., a brick-making plant or a farm producing vegetables or fruits, on account of perishability of the commodity, must be small.

In some industries like iron and steel industry the units are very large, due to the fact that integration offers many economies of scale. By-products like gases can be utilised and overhead charges reduced. In the same manner the pulp-making and paper-making sections of the paper industry may be combined or a sugar-making plant combined with a distillery. In modern industry, therefore, integration movement is largely responsible for enlarging the size of the plants.

The Indian Tariff Board reports give some idea as to the optimum size of the plant in the various Indian industries, e. g., 1000 looms and 40,000 spindles for a cotton mill, a cement factory with 60,000 tons daily capacity, an iron and steel concern with a productive capacity of 600,000 tons of pig iron and 400,000 tons of finished steel, a 400-ton capacity for a sugar factory and a match factory of the daily capacity of 10,000 gross boxes, etc. Thus the nature of demand, consideration of transport and the prospect of reaping the economic of scale, especially those arising out of the use of the indivisible factors, and the utilisation of the by-products are some of the factors which will determine the size of the plant.

10. Problem of the Output—its Quality. Having determined the size of the plant, the entrepreneur must next decide what to produce and how much. A fairly wide range of goods can, perhaps, be produced in that plant. But the entrepreneur will not produce all of them or all of them in equal quantities. The volume of production of each type will be dictated to him by his king, the consumer. It is his wish that the entrepreneur will consult. He will produce an output to suit the scale of preferences of the consumers. The functioning of the price mechanism, as we have seen, will settle this matter for him.

In some cases the plant may happen to be specific and may be able to turn out only one brand of the commodity. In that case there will not be much flexibility except that amount can be increased or decreased. But it generally happens that, with some minor modifications, it is possible to make a change in the assortment of goods turned out. A cloth mill may be able to make more towels or more dhoties or more of shirting according to changes in demand.

Further, the volume of production will be governed by the condition of trade; it will expand in a period of boom and contract during depression.

11. The Scale of Production. As for the question *Large Scale vs. Small Scale* production, there are several factors which the entrepreneur has to consider. There are certain advantages associated with the small scale while the large scale undoubtedly provides scope for several economies, both internal and external.

Advantages of Small-scale Production. (1) In favour of small-scale production it may be pointed out that the small manufacturer possesses greater degree of manoeuvrability. By prompt decision and quick execution, he can change his front and adopt new strategy as the market warfare indicates. Changes can be made overnight.

(2) His initiative and responsibility have not been sapped by routine. He does not need elaborate system of book-keeping and checks to prevent fraud or eliminate waste of labour or material. As Marshall says, 'the master's eye is everywhere,' and supervision is both effective and sympathetic. Not even the minutest detail escapes his notice and everything runs tip-top.

(3) Personal contact with the employees and a kind word thrown now and then will rule out the possibility of a strike or any other trouble which may threaten a breakdown of the productive machinery.

(4) Personal contact with the customers, again, sends them away most satisfied and is productive of good results.

(5) His advantage is the greatest if the demand is local, limited and ever-changing.

(6) He is usually the sole proprietor and enlightened self-interest acts as a strong spur to his feverish activity and unremitting labour.

With the wide dissemination of technical knowledge the number of external economies is increasing while that of internal economies is decreasing. This helps the small producer. Also, where business cannot be reduced to a routine the small producer has an advantage over the big producer.

Advantages of large-scale production. Large-scale production has advantages of its own.

(1) There is much greater scope for specialisation, both of labour and machinery. Everybody can be put on the job to which he can do the fullest justice and for every job the best men can be appointed.

(2) It is well known that a big, well-established concern can set up specialised machinery. A small cotton mill cannot have its own finishing or calendering plant.

(3) A big concern can instal the most modern machinery and also have its own repairing department so that it has not to depend on unreliable *mistris*, who sometimes do the repairing in such a manner that the machine stops as soon as they turn their back.

(4) There are then the commercial advantages of buying and selling. Several producers compete to secure the custom of a big concern offering favourable terms for its purchases. On the other hand, a big concern commands a wide market, for the customer can be assured of prompt and regular supply.

(5) Its vast resources enable it to stand adverse times better.

(6) It can afford to spend large amounts on research and experiments, which, in the long run, more than repay their costs.

(7) It can spend more money on advertisement and salesmanship.

(8) To a big concern overhead charges or supplementary costs, as they are called, come to much less per unit. These are administrative costs or the costs of management, including the salaries of managerial and clerical establishment, rent and cost of publicity and travelling salesmen.

(9) Besides it can turn waste products or by-products to good

them well-guarded and close. Every manager, according to his experience, has his own methods of deploying the labour force, his own technique of the disposition of the plant and his own peculiar strategy in attacking the market both for the purchase of raw materials and the disposal of finished goods, just as every teacher has his own method or plan of teaching (though he may not be unwilling to share his own method with other). The manager has, further, devised his system of finance, when to borrow, how much to borrow, how much to be invested and how much kept in 'liquid' form. All these are known as *Internal economies*.

External economies, on the other hand, are, not a peculiar property of any, particular business. They are known to all and shared by all. The specialised transport facilities, the banking facilities available in the place, the commercial facilities offered by the big dealers from whom any concern can buy raw materials, the existence of supplementary and subsidiary industries of which every concern can take advantage, also technical knowledge contained in scientific and technical journals, are some of the instances of external economies. All can benefit from them. If they have formed themselves into an association as, for example, Jute Mills Association, Cotton Mills Association, each one of them is effectively represented in their negotiations with the Government or Labour. Their interests are safeguarded and many problems are tackled with success collectively.

It is worth noting that as commercial and technical education spreads and other such developments take place, the field of internal economies is being narrowed and that of external economies is being widened. This is happening as time passes on.

14. The Problem of Location. One of the toughest problem that the entrepreneur has to solve is the suitable location of industry. The most important consideration is the transport relation with respect to materials and markets. The Tariff Board inquiries into several Indian industries revealed unsatisfactory location. The cotton industry was over-centralised in Bombay and has been moving away from Bombay in recent times to restore the correct balance. As the Tariff Board pointed out, till 1925 there was no cement factory within 350 miles of Calcutta and 250 miles of Bombay, the two biggest cement consuming centres. The Western Indian cement factories were far away from coal centres. Same defective location is found in the case of sugar industry. In Bombay the consumption of sugar per capita is the highest in India but, production is the lowest; in Bihar consumption is the lowest but the production is very large. This necessitates unnecessary haulage. Most of the Indian industries are over-centralised and show unfavourable transport relation regarding markets and materials.

15. What are the Causes of the Centralisation or Localisation? There are several factors which contribute to the concentration of industries or localisation as it is commonly known. Our jute industry is centred in Bengal, iron and steel industry in Bihar, sugar industry

in U. P. and Bihar and cotton mill industry in Bombay. Coming to the East Punjab, we find instances of localisation in districts, e.g., hosiery industry in Ludhiana, wood work in Hoshiarpur, furniture making in Kartarpur, blankets in Karnal, Durries in Ambala etc. Why is it so?

Among the chief factors that govern localisation may be mentioned the following.

1. *Nearness to Raw Materials.* To have raw materials near at hand is a great advantage. Transport costs will be considerably reduced. Production will be more economical. It is not surprising that most of the industries have been started in the regions where abundant supplies of raw materials are available, e.g., jute mills in Bengal and sugar mills in U. P.

2. *Nearness to Sources of Power.* Another attraction for the industry is the availability of power resources. If coal mines are near or there are hydro-electric works, several industries will soon crop up, e.g., iron and steel works in the coal regions.

3. *Proximity to Markets.* It is advantageous for an industry to have a wide market at hand. There will be much saving in the cost of transport. The factories near the consuming centres have a great pull over those situated at a distance. The expansion of the Indian cotton mill industry to north India and to Bengal has been actuated by a desire to be near the markets.

4. *Availability of Labour.* If trained labour is available, it is coveted as a great facility. That is why now industrialists flock to old established industrial centres. If somebody wants to start a hosiery industry, he will find it to his advantage to start it at Ludhiana.

5. *Availability of Capital.* Finance is the very breath of nostrils industry. Industry without adequate financial aid will soon die. Where there are banks and other finances ready to assist industry it will be great attraction and industrial units will cluster round that centre like a beehive cities like Bombay and Calcutta are the centres of industry because they are centres of finance.

Sugar industry is to be found in U. P. and Bihar because 75% sugarcane acreage of India is to be found in these provinces, jute industry in Bengal and cotton industry in Bombay on account of nearness of raw materials and port facilities. Similarly, the iron and steel works are situated in close proximity to source of raw materials and that of power.

6. Sometimes the political factor is responsible for the establishment of an industry. Some of the Indian states like Hyderabad, have been offering special concessions and facilities to industrialists to attract them.

7. In some cases religious causes, making for large concentration of people, give rise to some industries.

8. In some cases there is no particular cause except the momentum of an early start. The industry just happened to be started there.

The most important are the natural or climatic causes which affect the growth of raw materials. The main consideration is the cost of transport. The industry will be found in the vicinity of a large market because then it will be possible to reap the economies arising out of the use of 'indivisible factor'. It will be located near the source of raw material where it loses weight in the process of manufacture, *e.g.*, sugarcane in the case of sugar, bamboos in the case of paper making, etc. The weight of coal when used as fuel completely disappears. 'The main reason,' in the words of Benham, 'why different districts specialise in different products is that factors of production are distributed in unequal proportions over the surface of the earth.'

16. Causes of Further Concentration. After the industry has got going in a certain place, it then has a tendency to gravitate to that place. If any new entrepreneur wants to enter in the industry, he, too, will go to that place to start his business rather than start it elsewhere. Several reasons account for this tendency.

1. Trained labour is readily available there.
2. Plant and accessories and raw materials can be conveniently had.
3. Financing agencies have also properly developed in that place.
4. Several supplementary and subsidiary industries are established in course of time, and they are a valuable aid to the main industry.

5. Technical journals are published which are found useful by the industrialists.

6. Associations of entrepreneurs are formed to safeguard and promote common interests.

7. Means of communications and transportation become specialised and adapted to the needs of the industry. All these factors considerably assist the entrepreneurs. In a new place, he would simply feel at sea and will find even easy and ordinary problems difficult of solution.

8. Above all, there is what is called industrial inertia. Once established in a place, they do not like to move out. They stick to where they are. It is human nature that one is prepared to put up with known difficulties rather than face the unknown ones.

These are some of the factors which explain the persistence of industries in certain localities.

17. Advantages. All the factors mentioned above, as the causes of persistence of an industry, are the several advantages afforded by the place in which it has become localised, *viz.*, availability of labour, capital materials, etc, the benefit of specialised transport subsidiary industries, technical journals, associations, etc. Besides,

there will be mutual exchange of ideas, quality can be improved, costs lowered and common problems thoroughly thrashed and successfully solved. Labour of that category will be sure to find employment in that place.

Disadvantages of Localisation. 1. There is the disadvantage in that dependence of a place on one industry is dangerous. If the industry happens to be in a depressed state all the people depending on the main as well as subsidiary industries will suffer. The entire population of the place, which depends directly or indirectly on that industry, will share adversity. It is like placing all the eggs in one basket.

2. Further, there will be little scope for the employment of any other type of labour.

3. The specialised labour loses mobility and may not find attractive openings.

The obvious *remedy* is the one that is generally adopted, viz., to start supplementary and subsidiary and other allied industries.

18. Factors Making for Dispersion or Decentralisation of Localised Industries. Several developments have taken place in modern times which have plucked out old industries from their native soil and planted them into other lands.

1. *The development in the means of transportation* is one such factor. This development is a double-edged weapon. On the one hand, it has helped the localised industries to keep to their original home even though the supply of natural materials, on the basis of which they originally developed, has been exhausted and the market originally wide enough, is no longer adequate. Distant places can now be tapped for materials and markets. But, on the other hand, it has helped the transport of heavy plant to distant countries which are better markets, e.g., Swedish match factories have been started in India and the match industry has been helped to spread itself. Labour and technicians can be imported.

2. Further, *the rise of rents and congestion, high land prices and higher municipal taxation* in the industrial centres have driven out the industry. e.g., cotton mills have been shifting from Bombay to Ahmedabad, Sholapur and Hyderabad.

3. Finally, *the advent of electricity*, which can be carried to a distance of 250 miles very conveniently has enabled the industries to start at more convenient places for markets and materials. They need no longer cling to the source of power, say, coal mines, and suffer from the handicaps. On account of these reasons several of the causes which were responsible for localisation have ceased to operate and the industries have decentralised.

19. Delegation of the Entrepreneurial Functions. We have discussed at some length the various problems of organisation that an entrepreneur has to solve. We wish now to point out a tendency towards the delegation of some of his functions by the entrepreneur to other hands.

There was a time when the entrepreneur initiated, organised, directed and financed the enterprise. If it succeeded, he was enriched, if it failed, only he was ruined because the entire capital of the business was supplied by himself. The two functions of organising and risk-taking were indissolubly bound up and placed in the hands of one man.

But since the advent of the joint-stock principle, things have changed, although entrepreneurs of the old type still abound. We have witnessed a splitting up of the functions. The golden rule 'control goes with risk' has been broken.¹ An entrepreneur who is a master of business technique, a man of proved capacity and known integrity will not find much difficulty in getting round some moneyed men and attract the necessary capital through the sale of shares and debentures. He may invest no capital of his own. He initiates plans and designs everything. But the actual execution of the plan may be left in the hands of paid managers, secretaries or the managing directors.

Thus the shareholders, who include the directors and the entrepreneur, bear the risk; organising is done by the entrepreneur and management and administration carried on by salaried employees.

In modern times even the direction of production has passed on to merchant specialists who study the market, the state of demand at home and abroad and issue directions to the manufacturers and get the things made. We find, therefore, the entrepreneur simply initiates and organises whereas the other functions of direction and risk-bearing have been shifted on to other shoulders, chiefly to the shareholders.

The development of insurance business, too, has taken off the hands of the entrepreneurs several of his worries and risks. If the treasurer absconds with money, if the factory catches fire and if the materials ordered from abroad sink in the mid ocean, the insurance companies are there to make good the loss.

Again, through forward exchanges and the activities in the speculation market, the entrepreneur by means of 'hedging' can cover his losses from unexpected changes in the price of the raw materials.

Further, he is not the only sufferer; the huge labour force employed in a big concern also share in the fortunes of the business and bear the risk.

Thus it is pointed out that the entrepreneur has shifted the financial risk to the shareholders and several other risks to the insurance companies and speculators, work of direction is being done by merchants and management by the salaried employees. What then is left to the entrepreneur? Have not most of his functions been delegated by the formation of the joint-stock companies?

No doubt the entrepreneur has been relieved of several duties and worries but the delegation of functions is not so complete as it may seem. He has generally to put in some capital. The directors

1. For further discussion, see Robertson—Control of Industry.

of joint-stock company, who act as entrepreneurs, are the biggest shareholders and as such run the heaviest risk. Therefore there is not much of a breach in our golden rule 'Control goes with risk'.

Again, the risks which the insurance companies cover are not really business risks and it was unfair to burden the entrepreneur with extraneous risks. Pure business risks still remain with him.

Similarly, speculation does not relieve him of all risks. The merchants' part in direction is only negligible; it amounts to mere suggestion.

The labourers no doubt do suffer when the business fails. But their position has been compared with the passengers of a ship who can shift for themselves when the ship is about to sink, but the entrepreneur is the captain, who is the last man to leave, if he can leave it at all.

Our conclusion then is that there is some delegation but not a complete one. There is *divorce between ownership and control* of business, the shareholders being the owners and the control being vested in the directors. The old type of capitalist-employer has almost disappeared from businesses which count in these days. In the past the entrepreneur supplied capital, he also engaged his labour force. He was, therefore, the employer; but now the actual employment and control of labour is vested in the salaried managers. They are the virtual employers and the capitalist is the body of shareholders.

In India, however, this divorce between ownership and control has not been effected to a considerable extent. We have in India a peculiar graft on the joint-stock organisation, i. e., the managing agency system. The managing agents are the entrepreneurs. They do the initiating, planning, designing and directing. They also supply the bulk of the capital. In Ahmedabad as much as 31% of the capital resources of the mills are supplied by the managing agents. If they supply finance to such an extent, they also retain the control in their own hands. The directors are their nominees, are mere dummies. 95 out of 179 directors in Bombay cotton mills in 1925 were nominees of the managing agents. It was stated before the Tariff Board by Mr. J. A. Wadia in his evidence in 1927, that if the directors took active part they had to go, and Mr. Wadia was a director of 13 cotton mills. The real position is that the decisions are made by the managing agents and the directors act as their mouthpieces. The ownership and control in Indian companies, thus, largely go together. ✓

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CHAPTER XI

FACTORS IN CO-OPERATION

1. Introduction. In this chapter we shall discuss how the factors of production are combined and what problems are raised by their combination. We shall see how they are distributed over various industries and study the circumstances under which their mixing up together will yield diminishing return, increasing return or constant return.

2. Law of Substitution in Relation to the Combination of Factors. We have already discussed the law of substitution or equi-marginal return in consumption and we hinted that it was also applicable in production. It is necessary to give this point a further consideration when we discuss the way the factors of production are combined.

Factors are scarce in relation to demand. If they were free like air, no economic problems would have arisen in connection with them. We would have used them like air, till the marginal productivity fell to zero, i. e., till we got fed up with them completely and they ceased to make any further contribution to production. Even the smallest contribution would have been welcome, because it comes gratis.

But we have in fact to pay for them and they are not superabundant like air. To make this fact of scarcity less painful or to make them seem less scarce, we must choose a little more of one or a little less of the other. Substitution of one factor for another thus becomes an imperative necessity. This substitution takes place through the agency of the entrepreneur.

The community utilises all the factors of production through the entrepreneurs. He will try to combine the factors of production most economically. The entrepreneur is frankly out for profit. Just as the consumer wants maximum satisfaction, the entrepreneur is anxious to maximise his profits. Just as the consumer gets the maximum satisfaction by so arranging his purchases that from each direction of his purchase the marginal utilities equalise, in the same manner, the entrepreneur is able to get the highest possible return from his investment, if he is able to equalise the marginal productivities of all the factors he employs. He will utilise each factor up to a point where the marginal productivity (additional productivity by the employment of a little more of a factor) is equal to marginal cost.

Not only does he equi-marginalise the productivity of a given factor for various uses, but also the marginal productivity of one factor, say machinery against another, say labour. If the marginal productivity of machinery is greater than that of labour, he would

substitute the former for the latter. The result would be that, on account of the operation of the Law of Diminishing Returns, the marginal productivity of machinery will come down and that of labour will go up until the two are equalised. Hence it is clear that the entrepreneur constantly compares the marginal productivity of one factor with that of another. Only thus can he hit at the most economical combination of the factors of production. Whatever output he has decided to produce he will try to produce at the lowest cost per unit. He will try several permutations and combinations of factors of production. In order to devise the most efficient as well as the cheapest combination he will substitute labour for machinery and *vice versa*, or land for labour and *vice versa*, or capital for land and *vice versa*. All the factors compete for his choice. Not only is one factor substituted for another but one variety of one factor may be substituted for another variety of the same factor. An accountant may replace two junior clerks or bullock carts may be replaced by a motor lorry. The guiding considerations will be the relative prices of the factors and their efficiency. Benham suggests the following formula.¹

If the marginal product of factor A is greater than

Price of Factor A

The marginal product of Factor B it will be to

Price of Factor B

the advantage of the entrepreneur to employ a method of production which uses more of A and less of B.

It is necessary to remember that most of the factors are so unlike one another that it is not generally feasible to replace one factor completely by another. What usually happens is that we use a little more of one factor and a little less of another, i.e., substitution takes place at the margin. We have discussed elsewhere the concept of the marginal rate of substitution. "The marginal rate of substitution of any factor A for any other factor B is clearly the quantity of A that will just balance the loss of a marginal unit of B."

The Law of Substitution does not lead us to the conclusion that the entrepreneur will produce that output which entails the minimum total cost. If a shoe factory provides 10 shoes in a year, its total cost may be the least but it does not pay the manufacturer. He is not directly concerned with the cost; his sole concern is to maximise his profit and he does not mind spending more and more provided it adds to his profit. Similarly we cannot infer from the law that his output will be such that the average cost per unit is the least. The entrepreneur cares little for the average cost. It may be going up, he does not worry the least, provided the marginal revenue exceeds the marginal cost. Our conclusion is that the entrepreneur will go on expanding his output till marginal revenue and marginal costs are equalised and the Law of Substitution simply tells us that this output he will try to produce in the cheapest possible manner. For

¹ I. Benham—Economics, 1940, p. 193

that purpose he will discover the most economical combination of factors. This is the principle on which the factors co-operate, or are combined, in production.

3. How are the Factors of Production Allocated Among the Various Industries? This question has been partly answered above. Factors of production being strictly limited, it is very necessary that they are so allocated among the various industries that the community derives the greatest benefit out of them. It would, of course, be ultimately determined by the consumers' preferences. The consumers will have to decide which assortment of goods they are prepared to forgo in order to satisfy the rest of their wants more fully.

(i) *Allocation when the factor concerned is a free good.* We need not worry about the allocation of a factor, which is a free gift of nature. In that case it will be combined with other factors or, what is the same thing, allocated among the industries, in such a manner that its marginal productivity is zero. Its use does not entail any cost; it will be used so long as it can make even the smallest contribution or till its extra product falls to zero. In a new country where land is enough and to spare, it will be used like air, i.e., till its marginal utility is zero. In that way the return on other factors will be maximised. For example, you can maximise productivity per man by giving him say 1000 acres. After all each acre will make some contribution at least. In the same manner in a country of teeming millions like India or China where man is held cheap and other factors, like machines, are considered dear, labour will be used to such an extent that its marginal product is very low. It will not matter, because the wage is also very low. The price of the factor is the governing consideration. If the price of a factor is zero (i.e. it is a free gift), then it will be allocated so as to bring its marginal productivity to zero.

(ii) *When a factor is not a free good.* In actual practice, however, none of the factors are free gifts of nature. Each factor will be allocated among the various industries in such a manner as to equalise its marginal productivity in every industry where it is employed. No factor will be used till its marginal productivity is zero because in some other industry, its marginal productivity is bound to be positive (more than zero). In the absence of the factors being free gifts, productivity of a certain factor, say labour, can be maximised by withdrawing the other co-operating factors from other uses. While making this reshuffle, the marginal productivities in the alternative uses will have to be compared. If marginal productivity of labour is greater in iron and steel industry and less in sugar industry, then labour will be shifted from the latter to the former till the marginal productivities in the two industries are equalised. In the same manner if land devoted to sugar cane cultivation yields more than in growing cotton, it will obviously pay to withdraw some land from cotton growing and divert it to sugar cane. This diversion will continue till the marginal productivities in the two alternative uses

of land have been equalised. What applies to these two factor applies to all. The factors of production will be ideally allocated among the various alternative uses when there is no inducement for diverting them from any one use to another. This will be the case only if the marginal return in each use is equal. So long as it is not equal reshuffling will go on. *The best allocation of the factors of production is when 'the value of marginal product of factor, will be the same in every line in which it is employed' or the equilibrium situation with regard to allocation of factors 'is that in which the community places the same value upon marginal product' of the factor in every industry.*

4. Why are Some Factors Left Unused in a Country ? It will also be clear from the above discussion that it will pay a community to let some of its factors remain idle. In every country there is ample wood in the mountains. The Himalayas abound in unexploited forests. There are probably lot of minerals lying in the bowels of the earth. Only 6% of our hydro-electric resources have been developed. Why ?

Why do we not use all these resources ? The answer is that the development and exploitation of these idle or unused factors require the aid and co-operation of some other factors. These co operating factors are not lying idle. They will have to be withdrawn from their present uses. According to the principle laid down above, the factors are supposed to have been allocated in the manner which the community has decided to be the best. If it were more profitable to develop these resources, some enterprising *entrepreneurs* would have undertaken the task already. The fact that it has not been done is a proof that the marginal productivity of the factors, if used in these new directions, would have been less. Hence it is that the community is getting a better satisfaction from the factors at its disposal by leaving some of them unused. This exposes the fallacy underlying an argument that we shall increase our satisfaction by using the unused factors. The growth of other factors will, in course of time, make the exploitation of these resources worthwhile.]

There is another corollary from this discussion. It always pays to discard obsolete machinery and equipment to make use of new and more efficient one, for the factors are not producing in combination with old equipment as much as they can in conjunction with the new. It is clear therefore that the cry "railway capital in danger" is false when a better means of transport either road transport or aviation, is available. The community will be able to satisfy its wants more fully and more economically with the factors at its disposal if old machinery or technical equipment is scrapped off.

5. Law of Returns in Relation to Combination of Factors. There are three laws of Returns known to economists. The Laws of Diminishing, Increasing and Constant Returns. "There is said to be increasing, decreasing or constant return according as the

marginal returns rise, fall or remain unchanged " as the quantity of a factor of production is increased. In this case the returns increase or decrease for a particular factor.

But the industry as a whole may also be subject to varying returns. Then it is best to refer to costs of production. An industry is subject to increasing, decreasing or constant return according as the marginal cost of production falls, rises or remains the same, respectively, with the expansion of the industry.

6. Law of Diminishing Returns. We have already discussed the Law of Diminishing Returns in all its aspects at some length and we do not propose to cover the same ground again. But there is one point that we wish to re-emphasise here, *viz.*, that the *Law of Diminishing Returns represents the most efficient combination of factors of production.* It is a combination that will bring the highest return. We refer to the table on page 107 and the discussion on the subsequent two pages. It is clear from there that we can get increasing return per man but all such combinations will involve a wasteful use of land *i.e.*, more land is given than the number of men can properly cultivate. It stands to reason that by giving more and more acres of land, to a man, it is possible to increase productivity per man and this can be done till the marginal product of land, *i.e.*, (productivity of the last acre added) is zero. But this is a highly wasteful use of land. Land being scarce and commands a price. Such a course will not be adopted by any sensible person. Thus a combination in which you get increasing return per man is not an efficient or economical combination.

Similarly, you can maximise return per acre, and get an increasing return, by throwing more and more labour and capital on it which, again, will mean waste of capital and man-power and hence not an efficient combination.

Thus any attempt to obtain increasing return either per man or per acre will represent a departure from the most economical combination, which will be one when increase in factor will lead to diminishing return setting in. We expect that in practice every factor will be combined with other factors in such a proportion that if it alone were increased its average product would diminish. This point will represent the right combination or a correct balance between the various factors in the combination. Any other proportion will mean less than the maximum return.

There are economies obtainable from increasing the scale of production or by fuller utilisation of the indivisible factor but these are quite apart from those economies which arise from combining the factors in right proportion whatever the scale of production undertaken; there is a certain combination of factors which would be the ideal one to produce that output and it will not be the one which yields increasing returns to some factors at the expense of others. But the point where the increase of factor leads to diminishing return for that factor will be the most efficient combination increasing return being a sign of wasteful use, *i.e.*, a wrong combination.

We may again state the Law of Diminishing Returns thus: "As the proportion of one factor in a combination of factors is increased, after a point, the marginal and average product of that factor will diminish. This assumes that the state of technical knowledge is given and that there are no economies of scale.

(Benham).

7. Law of Increasing Returns. An industry is subject to increasing returns if an extra investment in the industry is followed by more than proportionate returns. *i.e.*, if the marginal product increases. In terms of cost, the Law of Increasing Returns means the lowering of the marginal costs as industry is expanded. As marginal costs govern price, you can say that the Law of Increasing Returns operates in an industry if with every expansion of its output, the price of the product falls.

We have already seen that what economies can be reaped if the scale of production is increased. Advantages from specialisation of labour and industry and other commercial and miscellaneous economies make it possible to lower the cost of production and we have increasing returns.

The Law of Diminishing Returns operates when there is dearth of an essential factor. But if all the factors are available in the requisite quantities when the industry is expanded, then the Law of Increasing Returns will operate. 'The expansion of an industry, provided that there is no dearth of suitable agents in production, tends to be accompanied, other things being equal, by increasing returns.'

There is another way in which we arrive at the Law of Increasing Returns. The Law of Diminishing Returns operates when a variable factor is applied to constant factors *i.e.*, when only one factor or set of factors is increased and the result is a defective proportion of the factors combined. This is due to an incorrect combination. Now to restore the balance, increasing returns will follow till the balance is completely restored or a position of perfect adjustment is attained. Any disturbance of this equilibrium will again lead to diminishing returns.

The concept of indivisibility, too, has a close bearing on the Law of Increasing Returns. Suppose a college builds a hostel to accommodate 200 boarders but at a pinch it may be made to accommodate 250. If actually the number of boarders is less than 200, then every increase in the number up to 250 will yield an increasing return because the hostel, an indivisible factor, is being more fully used.

Similarly a manufacturer sets up a plant to cope with a peak demand and in actual practice it may be producing below capacity. In that circumstance when an addition is made to some other factor or factors, the indivisible factor will be more fully employed and increasing returns will follow. A factory has a minimum establishment of clerical staff and peons. If production is increased five times,

ment away from it the diminishing returns. But if we keep to the optimum, for however short period it may be, we shall have constant returns.

There is still another way to explain the operation of the law. When there is a dearth of an essential factor, there operates the diminishing returns and when all the factors have elastic supply and economies can be effected if the scale is increased then we have increasing returns. But if the requisite factors are available in the right quantity and we have reached the optimum of the economies, then increased application of the factors will simply lead to proportionate returns. The Law of Constant Returns will also operate if "rising costs due to scarce factors of any kind are just equal to the economies of large scale production."

9. Rationalization. So far we have been studying the combination of factors from the point of view of individual firm. Now let us look at the industry as a whole. When it is organised in the best possible manner it is said to be rationalised.

After the World War of 1914-18, Germany, stripped off a part of its valuable territory and faced with heavy reparations demand, was forced to reconstruct its industry. This process of reconstruction has been called *Rationalization*. The movement soon spread to other Continental countries, England and America. But it had its fullest application in Germany. For Germany rationalization was an imperative necessity. Without this they could not support themselves and pay war debts. There rationalization became a popular cult.

The main idea underlying rationalization is to bring the efficiency of an industry as a whole to the highest pitch possible by eradicating all causes of waste and inefficiency, and to bring about consciously and deliberately an adjustment between supply and demand so far as the products of that industry are concerned.

Under competitive capitalism equilibrium is established by the free working of natural economic forces, but this natural adjustment entails suffering and sacrifice. For example, if there is over-production, then price will fall, the working of some concerns will become unremunerative; they will struggle for some time, may be a year, but will ultimately go down so that supply may be adjusted to demand. The advocates of rationalization say that this struggle and suffering is avoidable by anticipating depression rather than waiting passively for it to come about. They point out that the industry as a whole can be so scientifically organised and systematically managed that such crises can be avoided altogether or their severity mitigated if they actually occur. The remedy is rationalization.

In the words of Balfour, "It (rationalization) really is the method of technique and organisation designed to secure the minimum waste in effort and material, added to that, the scientific organisation of labour; the standardisation of materials and products and the simplification of processes and physical improvements in the system of transport and marketing."

The main planks in the rationalization programme are *modernisation, scientific management and amalgamation*. Every producing unit in the industry must have a most *modern and complete* equipment of plant, machinery and other accessories, so that every part of the equipment is nothing less than the very best. All worn out, old design and obsolete machinery is to be ruthlessly scrapped. It requires heavy financial investment, no doubt, but it is recognised that working on the old plant really does not pay and the use of up-to-date machinery is very profitable in the long run. The loss entailed in scrapping of the obsolete plant is ultimately more than made up.

But mere modernisation is not considered enough. It must be accompanied by *scientific management*. The idea of scientific management originated with Taylor in America. It involves *Time Study, Motion Study* and *Fatigue Study*. The personnel of the factory is to be trained and instructed in using the best possible method of doing the job in the minimum time. These methods are discovered by the intensive study of time and motion involved in work. The idea is to eliminate all waste of human energy, to do the job in as little time as possible and with the minimum of fatigue to the worker. Scientific management is also to be applied to the organisation of the office and the factory generally. Modernisation and scientific management are calculated to bring the efficiency of individual units in the industry to the highest possible level.

Maximum efficiency of each individual unit in the industry, however, does not solve the problems of the industry as a whole. It may rather create the problem of over-production when each unit is turned to the highest pitch. *The basic idea of rationalization is not efficiency of the units but the health and efficiency of the entire industry.* This necessitates a collective action on the part of all engaged in the industry. Most of the ills of the industries can be attributed to the existence of isolated, independent and unco-ordinated units. They try to shift for themselves and bring down the industry in the attempt just as a similar effort on the part of the depositors of a bank ruins the bank and themselves. Close co-ordination and cordial co-operation among the producing units seems to be absolutely essential. Without *centralised control* the complicated and difficult problems of modern industry, especially regarding efficient marketing cannot be successfully tackled. With this end in view amalgamations are advocated and fostered. The inefficient units are to be closed down and the efficient ones are to be knit together so that the industry becomes an integrated whole. *Production is concentrated in the units which have the lowest cost of production.* Special attention is to be paid to scientific marketing while assigning quota of output so that cross-haulage is avoided and nearest markets are served by the nearest units. This will reduce transport costs to the minimum.

Rationalisation is beneficial in several ways :—

(1) *Economies of scale.* In a rationalised industry the producing units are large and all the economies of large scale production

are available. There is economy of buying and selling, economy of space, economy of tools, economy of specialised labour and that of specialised machinery. More money can be spent on research and experiments.

(2) *Improvement in the standard of living.* Mass and standardised production lowers cost and brings products within the reach of poor members of the community. The standard of living consequently rises.

(3) *Increase in competitive strength.* A rationalised industry is strongly entrenched against onslaughts of foreign competition. It can considerably cut down the costs and face competition confidently.

(4) *Stability.* The industry is able to face bad times with greater confidence because of its large financial resources and large volume of trade. Periodical jolts and jerks can be avoided. The depression can be anticipated and suitable measures adopted. Much suffering is thus avoided. The industry is thus placed on a sound and stable footing.

But rationalisation is not an unmixed blessing. It creates several problems and difficulties, viz.,

(1) *Financial Difficulties.* Rationalisation needs heavy expenditure. The capital structure of the industry becomes costly and may handicap the industry in meeting foreign competition, coming from industries having more economical capital equipment. There is danger of over-capitalisation. Additional financial aid may not be forthcoming when further steps in rationalisation are necessary.

(2) *Displacement of Labour.* Rationalisation involves a high degree of mechanisation. The immediate effect of the introduction of machinery is the displacement of labour. If human-beings suffer rationalisation is not commendable. In the long run, however, more employment is created.

(3) *Abuses of Monopoly.* Powerful combines which are the outcome of the rationalisation movement exploit the consumers and charge unduly high prices although they are in a position to reduce the prices.

(4) *Less Scope for New Business Talent.* The industrial leaders of big combines throttle the rise of new enterprise. The promising rivals are ruthlessly and unceremoniously crushed. It is a national loss.

Competitive capitalism is almost dead. It is a pity that the Indian industrialists are still living in the 19th century. Our jute mill industry, sugar industry and cotton mill industry and several others have been suffering from lack of co-operative action but they have not given up the path of isolated individualism. They prefer to sink alone to swimming together. The truth of the simple proverb 'unity is strength' has not yet gone home. A proposal for rationalization of the cotton mill industry was torpedoed by the

senseless opposition of a few managing agents. Cement industry in India is the only industry which by cartellising itself chose the path of sanity and wisdom. Let us hope that our industries will rationalise themselves to meet the post-war industrial struggle.

10. Joint Supply. Here is another problem presented by the combination of factors. In case of joint supply two or more things are produced as the result of joint costs of production. They are generally produced in fixed proportions and the producer must accept them as they are. He will not be able to assign separate costs to each of the two products. Cotton and cotton seed is said to be the example of this type. The proportion of the two cannot be varied.

There are cases, however, when it has been found possible to vary these proportions. By cross-breeding in the case of sheep it has been possible either to breed good wool yielders or good mutton-yielders. In a case like this it is possible to ascertain the marginal cost of each. A change in the quantities produced will make a change in the total cost and from this change marginal cost of each can be found out. If you breed more wool-yielding breed, then the extra cost entailed or the addition to the total cost is obviously the marginal cost of so much extra quantity of wool. In the same way marginal cost of mutton can be ascertained. This knowledge of separate marginal costs will help the entrepreneur to adopt the most economical combination from his point of view, whether, that is, considering the respective demand prices he wanted to have more wool or more mutton.

11. Composite Supply. Composite supply represents a case when a certain want can be satisfied by two or more commodities which are really substitutes for one another, e.g., tea and coffee or labour and machinery. It will happen in a case like this that when the demand for one thing increases, the demand for the other decreases. The combination of factors of production will be adjusted accordingly. If it is discovered that a certain combination will produce tea much more cheaply, then tea may replace coffee and the factors so far devoted to the growing of coffee may be diverted to the cultivation of tea.

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CHAPTER XII

FACTORS OF PRODUCTION IN RELATION TO THEIR MOBILITIES

1. **Introduction.** We have discussed elsewhere how the functioning of the price-system tends to bring about a harmony between the producers and the consumers. The producers tend to produce that assortment of goods and services which the consumers most prefer. Any change in consumer's scales of preferences must produce corresponding changes in the direction of productive activity. This striving after the satisfaction of the consumer's wants goes on ceaselessly, because that way lies the maximum profit for the producer.

2. **If The Factors Were Specific.** The extent to which the entrepreneur can make the desired changes in production depends upon one important question, *viz.*, how far are the factors of production mobile or adaptable to the changed conditions. If the factors were all specific without the least degree of flexibility in them, then the power of the entrepreneurs to introduce changes in the productive system would be seriously curtailed. It would not be possible then to make any variation in the assortment of goods and services which are being produced. Their work would be very simple then. They could either increase the quantity of goods and services or decrease it by using more or less of the factors. But the factors, being specific, could not have been moved out of their existing grooves.

3. **Actually They Are Not Specific.** Fortunately the factors of production are not so specific as that. They possess a high degree of mobility. The extent of the mobility, of course, varies from country to country. It depends on several factors, *viz.*, the development of means of communication and transportation, the state of technical knowledge and the extent to which political and social barriers have been broken down. In some countries the conditions in this respect are more favourable than in others, hence a greater degree of mobility.

4. **What is Mobility?** By mobility we do not mean merely physical or *geographical mobility*, *i.e.*, the bodily transfer of a factor of production from one place to another, although the term mobility includes this too. But mobility also implies an alternative use either in the same place or in another place. In this sense mobility means *mobility between occupations, mobility between places, and mobility between industries*. A farm may be devoted to the cultivation of cotton instead of sugar-cane, it is change of industry but no change of place. A manager of a cotton mill at Ahmedabad becomes a manager in a mill in Bombay; it is a change of place but not of occupation. A Professor of Economics in Bombay takes up a job of

an Economic Adviser to a bank in Delhi; it involves a change of place and also a change of occupation. The person is the same, but he becomes a different factor altogether. A clerk gives up his job in a sugar-factory and becomes a clerk in a cotton mill; he has changed the industry. Thus a mobility of one type does not necessarily involve mobility of the other two types too. We shall discuss the extent of mobility in the case of each agent of production.

5. Mobility of Land. Economists define land as consisting of natural resources like mountain, sea, rivers, climate, soil, air, sunshine etc. It is possible to divert the course of rivers by building dams and turn the water into canals. But we must confess our inability to move mountains from their places, to change a tropical climate into a temperate one, to carry our land to a region where rainfall is abundant or bodily transfer our college building and hostel to a better locality. "Land" baffles our efforts as regards mobility since *geographical mobility of land is out of the question*.

But, this is not the only kind of mobility with which we are acquainted. Mobility, in the sense that we have defined it, means the possibility of a factor being put to alternative uses. Is land absolutely specific? Although some land may appear to be barren and may be able to grow nothing except scanty grass blades for goats and sheep on account of meagre rainfall, yet most of the land is not such, and even this land may be made to grow several other things by human efforts. To a superficial observer, the Himalayan ranges may seem fit to grow forests and nothing else, and yet it is not so. The small irregular level patches of ground here and there show that man can turn even dense forest and hilly land into an arable one. Similarly, the marshy land can, by drainage, be made to grow rich crops.

6. How Land May Be Made Mobile. Although land does possess some degree of specificity, yet within certain limits it can be made to grow quite a large variety of crops. A man may not be able bodily to transfer his land from one city to another, yet by selling it in one place and buying it at another, he has given it mobility. There is another way. A man having land in different places may divert labour and capital to one place and improve land there and neglect it at another place. Thus one land becomes more productive and the other loses productivity and it is productivity in which we are really interested. In this way land becomes mobile.

But a greater mobility is given to land where the product of land itself is transferred. It practically transfers the service of land from one place to another. We value a factor not for its own sake but for the service it renders. Thus land is not so immobile as is generally supposed. It can be put to several alternative uses, wheat growing land can be changed into pasture land and *vice versa*. If nothing else can be done its product can be transported. This degree of mobility is sufficient for the community to produce the assortment of things it most prefers.

The only limiting factors in mobility are climate, and the nature of the soil. Large investment of capital may also be needed for making land fit for alternative purposes. But the limitations are not too serious as to render land entirely immobile.

If the Government imposes restrictions on the transfer of sale by heavy registration fee on transfers, it will tend to reduce its mobility. The Punjab Land Alienation Act of 1901 applicable in the East Punjab has somewhat restrictive effect, for non-agriculturists who may like to invest capital in land are not permitted to purchase land from the agriculturists. Agricultural land is not allowed to be put to non-agricultural uses. The non-agriculturists in the East Punjab are generally moneyed people. Restriction imposed on their purchases of land means a divorce between land and capital. The most efficient combination of the factors of production may thus be prevented. The Act, however, may be justifiable on other grounds.

7. Mobility of Labour. The human baggage is said to be the least portable. Let us consider to what extent mobility, in all its forms, exists among the workers. It may be repeated here that there are three types of mobility, viz., mobility between industries, between places and between occupations.

Mobility between industries. Mobility between different industries presents no difficulty. An accountant, a typist or a chowkidar in one industry can easily occupy a similar position in some other industry. The work of a machineman or a mechanical engineer or a salesman is practically the same in every industry. There are a number of occupations common to all industries. Hence mobility between industries is quite easy provided there is no change in occupation. Whenever, therefore, some industry is contracting and another is expanding, such people can easily shift.

Mobility between places. As for mobility of labour from one place to another, called *geographical mobility*, there are found fairly formidable barriers. There is the dread of the change, very vague but nevertheless real. No person likes to be uprooted from familiar environments and transplanted in an uncongenial soil. Few people have the heart to begin life afresh in a new place, especially if it is so with people who are getting on in years. The youthful workers are enterprising and adventurous and they can be easily persuaded to move out.

Differences of language, habits, customs and modes of life are other deterrent factors for labour to move either from one part of the country to another or from one country to another country.

Mobility between countries is further hindered by immigration laws. India has an over-flowing population, whereas there is lot of elbow-room in Australia, New Zealand, Africa, Canada and America but immigration laws prevent the Indians from entering such lands. Because the whiteman's standard of living is threatened. System of poor relief, unemployment benefits and other state assistance

offered to the workers in distress reduce desire for mobility and renders labour all the more immobile.

In India our crowded cities, congested industrial areas, lack of housing facilities, insanitary surroundings, high cost of living, an ever-recurring cycle of epidemics, are quite enough to frighten away labourers. That is why the Royal Commission on Indian Labour remarked that labour is pushed, and not pulled, into industrial employment.

The development in the means of communication and transportation has facilitated geographical mobility considerably. When in the post-war years a journey to America can be performed by air in 48 hours and there is a corresponding stepping up of other means of transport, labour is sure to become more mobile.

Mobility between Occupations. Mobility between occupations, is the most difficult one. It is of two types : (a) *Horizontal Mobility*, i.e., mobility between two occupations on the same level, e.g., a professor of History becomes a professor of Economics or a blacksmith becomes a carpenter. Such a mobility is not so difficult ; a man endowed with commonsense and of reasonably hardworking habits can, after a short period, adjust himself to the new position.

(b) *Vertical mobility* is the mobility to a higher level, e.g., a clerk becomes a teacher or a mistry becomes an engineer. This mobility is very difficult. Apart from natural aptitude, different occupations require different skill and knowledge and it is not so easy for one to fit oneself into another occupation, especially if one has already put in a certain number of years in one occupation. In case one is new to an occupation chances of one's moving out are greater but as years pass they become remoter and remoter.

8. How Far is Labour Actually Mobile ? There is said to be freedom of enterprise or occupation under the present economic system. But it is all in theory. A surgeon's job is very paying and many people would like to send their sons into that profession. But how many parents can afford to spend Rs. 25-40 thousands on their training and education and how many young men have the patience, aptitude and ability to get F. R. C. S. (London) ?

To tell a poor man that doors of all occupations are open to him is a cruel joke. Examinations, licensing system and demanding high premia for apprenticeship (e.g., in the case of chartered and incorporated accountants) apart from restrictions imposed by industries themselves are effective barriers which not many can cross. Some jobs, like the high civilian post or posts in diplomatic service, require high social status and influence of the parents. This last factor is the most potent one in keeping a young man of a poor family off.

There is thus very little mobility among grades of labour. It is not surprising that the most respectable jobs happen also to be the most remunerative ones while those in the lower social scales are also in the lower economic scale.

But mobility within a group and among unskilled labourers is fairly sufficient for the purpose of making economic adjustments. There is a wide range of jobs that a man having reasonable physical fitness and endowed with a fair amount of intelligence can successfully take up. Further, a wholesale movement of labour is not needed in order to meet a new situation. Labour may be sluggish but mobility goes on slowly but surely though imperceptibly from occupations where the demand is less to those where it is greater.

Again, what is wanted is not direct substitution but merely indirect reshuffling. If cotton industry is contracting and the sugar industry is expanding, then it is not necessary that there should be a direct transfer of the personnel from the former to the latter. What will actually happen will be the shifting into allied occupations. Some workers from cotton industry may move into jute industry and some of the latter may move into paper mills and workers from jute or paper industry may infiltrate into sugar industry. There will be several other lines in the chain. But ultimately, without much hardship or disturbance, the mobility from the contracting to the expanding industry will be effected.

A stationary or declining population is a handicap in the way of mobility, whereas a growing population like that of India is a great help, for the new generation can enter into new occupations and avoid those which are becoming unremunerative.

Our conclusion is that although there are very serious handicaps in the mobility of labour, yet for adjusting economic factors to the new requirements of industry, it is sufficient, unless the changes are very rapid and fundamental which is seldom the case.

9. Mobility of Capital. Capital takes several forms. There is working capital consisting of a bank balance, stock of raw materials and semi-finished goods, and consumer's goods. About the mobility of this part of the capital there seems to be little doubt. Money is absolutely in a floating state and can be put to any use and may be taken anywhere, the same is the case with consumer's goods in the hands of producers. Raw materials and semi-finished goods are also fairly volatile.

Another competent part of capital consists of tools and implements and simple machines which can be used by every industry and can be transferred to any place with ease and without much cost. This part of the nation's capital is also mobile.

But the most important and the most expensive part of the community's capital consists of the fixed capital goods, i.e., buildings of factories, machinery, permanent equipment of railways like railway lines, station buildings, canals, tube-wells, etc. In such cases mobility is lacking. All such capital is permanently fixed and cannot be easily moved to other places. Suppose a farmer has made a mistake in locating his farm house and well and he wants to interchange the place of the two. Nothing will prevent him from pulling down the farm house and dismantling the well. The

materials can no doubt be used again. But at what cost? He will be able to salvage only a fraction of the original cost. The loss is so much that no man of ordinary prudence will undertake this type of reconstruction. Only Mohammad Tuglaq could change his capital from Delhi to Devgiri and order the wholesale movement of the people to, and then from Devgiri. There is a very recent instance of dismantling of plant and its transportation. When the deluge of Nazi hordes was hardly a dozen miles from Moscow, the Russians had to dismantle their plant and machinery and other equipment of heavy industries and transport them behind the Ural Mountains. But here cost was no consideration. Such a thing will never be done in normal times. A Hitler was needed for making the unusual usual. Under ordinary circumstances fixed capital is fixed and not mobile.

Further, such capital is usually also sunk or specialised. You cannot turn a cotton mill into an ice factory or a jute mill into a sugar factory. When an entrepreneur has started an undertaking, his die is cast. He has burnt his boats and there is no going back. Not only, therefore, the fixed capital must remain where it is but it must also continue to be used for the purpose for which it was originally intended. When we think of each capital, immobility seems to stare us full in the face.

But by mobility we do not merely mean geographical mobility, it also means the possibility of being put to alternative uses. In this latter sense even capital possesses a fair degree of mobility. Transport services can be made to carry anything.

Plant can be made to produce, with very slight modifications, entirely different products. It is said that the machinery used in the making of watches can be made to produce sewing machines. A plant meant for motor car production can be used to produce aeroplanes and other armaments.

Even within its own line a wide range of articles can be produced in the same factory with the same plant. A cotton mill can make shirting, dhoties, suiting, towels, bedsheets and what not. A sugar factory can make ordinary sugar or sugarcubes. A jute mill may make hessian or sacking. The variety of final products which a paper mill can make is indeed very large. To a layman capital seems to be sunk but the entrepreneur knows what he knows. He has several strings to his bow and several schemes up his sleeve. Although, therefore, capital will remain where it is yet the possibilities of alternative uses are not so limited.

Besides, flexibility to the capital structure can be imported in another way. There are new savings like the new generation of labour. These savings can be diverted to those uses which have become more important and more profitable. Every manufacturer sets aside certain amount out of the annual profits towards the depreciation fund. The fund is utilised for repairs, renewals and replacements of the plant when it has become worn out or obsolete. But it will be very rare that the plant is replaced, when the time

comes, by another plant absolutely identical with the old one. A modern and up-to-date machinery will be installed instead. If the industry itself is decaying, then the entrepreneur may buy entirely a different plant and enter a new industry. Capital is thus being used up and replaced or not replaced as the new economic situation demands. This is nothing else but admitting that capital possesses mobility. It is not perfectly mobile, but the degree of mobility is sufficient for our purpose, viz., redistribution of capital so that the necessary changes may be made in the assortment of goods and services in keeping with the wishes of the customers.

10. How Far is Modern Economic System Adaptable ? Having examined the extent to which several agents of production are mobile we are now in a position to see whether the modern economic system as a whole is rigid or flexible. Does it admit of modification or are we tied down to a particular structure of economy for good ?

We have seen that the free mobility of the factors of production is hindered in practice. Physical mobility of land is impossible. Huge investments of capital are sometimes needed for clearing draining and improving land to make it arable. We are at the mercy of weather, climate and rain. These are some of the impediments in the way of mobility of land.

Labour is also not freely mobile. Few are willing to leave their homes and hearths for a petty gain. People like to live on in their native environments on account of difficulties of language and the differences of customs. Difference in skill required for different occupations, high cost of training in some professions, long period of apprenticeships in others, social disabilities and state regulations make free entry into an occupation a myth.

Capital is tied down to its rocks. To dismantle it and transport it proves a costly pastime. It becomes so specialised as not to be available for any other use.

These are real difficulties. But inspite of them the structure of productive economy is fairly elastic. It is not so rigid as it might seem to be. Land can grow a fairly wide range of crops, and it can be put to several alternative uses indeed. Mobility of labour between industries is easy and that between places is being facilitated by cheap and efficient means of communication and transportation. Mobility between different occupations is being assisted by wide diffusion of educational facilities and those for technical training. The advent of the new generation makes up for the lack of mobility on the part of the older generation and it is pushed into new channels. Physical mobility of capital may not be possible. Yet a given plant can be made to produce a number of alternative products, so that variations in the composition of final products or consumers' goods can be made without much difficulty. The factors of production, therefore, present little difficulty when an entrepreneur has decided to make changes in production.

11. Conclusion. The spirit of individualism and competition is abroad. Three freedoms have been given to the economic world, *viz.*, freedom of enterprise, freedom of contract and free use of property. The advent of democracy is breaking down political barriers against the common man. Spread of socialistic tendencies everywhere is sweeping the social disabilities. The phenomenal development in the means of communication and transportation has annihilated space and time. Economic dictatorship in some countries has bent everything to the will of the state and changes in the production structure would stagger a man of the last generation. Scientific progress and improvement in technical knowledge have opened unheard of possibilities for the entrepreneur. Several new industries have been developed and old ones allowed to decay unwept. The modifications have been smooth and imperceptible without the slightest shock to the economic system. We can, therefore, safely conclude that the modern economic system is perfectly adaptable. The World War II has demonstrated to what extent and with what rapidity the national resources can be diverted and put to uses which the community decides to be most urgent.

CHAPTER XIII

FORMS OF BUSINESS ORGANISATION

1. The Individual Entrepreneur. Entrepreneurial work can be organised in different ways. The earliest and the most numerous if not the most important type is 'one-man' business. Anybody who has a small capital can set up a business. The initiative is in the hands of the owner of the capital. For starting a business capital is the primary requisite.

The organiser of 'one-man' concern puts in his own capital and may also borrow some. He will rent a shop and have the service of assistant if necessary. He himself makes purchases and personally attends to the sales. He is his own manager. He initiates, organises, directs the work and takes the entire risk. The sole proprietor combines in his person the function of capital, enterprise and even labour in many cases.

Such a business is generally conducted on a small scale. This was the type of organisation prevailing in ancient India when her industrial achievements had reached their zenith. In agriculture and retail trade of all types, the sole proprietorship system is still the rule in most countries even now.

2. The Advantages of the Individual Entrepreneur. This form of business organisation offers several advantages.

(1) The combination of financial interest and sole responsibility for running the business is conducive to efficiency. The individual entrepreneur works hard, long and late. The interest of his business is uppermost in his mind and provides an incentive for unremitting toil.

(2) All transactions and operations are, through prudent management, performed in the most economical manner and waste of all kinds is eliminated. No elaborate account-keeping is necessary.

(3) It is possible to pay individual personal attention to all customers and give them entire satisfaction at minimum cost. Every change in tastes and fashions is noted and provided for.

(4) The individual entrepreneur is in the best position to satisfy demand which is strictly local or fluctuating. Quick decisions are possible to meet rapid changes in business conditions. Few forms of business possess such a high degree of flexibility.

(5) This form of business is also the earliest to start and easiest to wind up. The individual owner is the only one concerned.

Within its limited sphere this form of business organisation represents efficiency and economy of quite a high order.

3. Limitations of the Individual Entrepreneur. But there are also limitations from which the individual entrepreneur suffers.

(1) The capital at the command of the sole proprietor is generally meagre which prevents expansion of business, however, profitable.

(2) Also one man feels very much handicapped in looking after the many sides of the business. There is a limit to human capacity. This makes him forego several economies and miss opportunities of making profitable bargains. These handicaps become more marked if the entrepreneur is becoming old and no longer possesses his youthful vigour, energy and mental alertness.

(3) No first rate business can be built up in this way and no country can win industrial leadership when her business is organised in such a primitive manner.

4. Partnership. Limitations of one-man business give rise to another form of business organisation, viz., partnership. Two, three or more people combine, contribute capital and agree to share profits and bear losses in agreed proportions. It is not necessary that everybody must contribute and contribute equally towards the capital of the business. A partner may simply contribute his ability. Similarly, it is not necessary that profits and losses should be shared in the same proportions. The terms of partnership are highly elastic. The responsibilities and the privileges of partners are laid down in the partnership deed, which, however, can be modified by common consent. There is no state control so long as the activities of the firm are legal.

Partnership type is a very suitable form for all medium-sized businesses, where personal efforts of the owners are essential, e. g., flour mills, hosiery factories, furniture works, ice factories, sports factories, banking firms etc. Although it is not so numerous as 'one-man' business but it is quite common and important.

5. Advantages of Partnership. This form of organisation offers several advantages.

(1) As compared with the individual entrepreneur, they have at their command larger capital, more business ability, larger resources and bigger man-power.

(2) It is possible to establish wider personal contacts to the mutual advantage of all.

(3) Business can be run on a larger scale enjoying the various economies of 'scale', e. g., economy of space, economy of tools, economy of specialised labour and machinery, economy in buying and selling, larger expenditure on research and experiments and publicity.

(4) The union of ownership and management is a spur to efficient and economical working.

(5) It responds promptly to changes in business conditions and is very highly adaptable. The partners can take prompt decisions.

There is no red-tapism. The whole procedure is simple and, not cumbersome.

(6) The existence of unlimited liability curbs the speculative tendencies of the partners and prevents launching of rash and risky enterprises. But they have at the same time the ability and the resources to keep pace with the times.

The partnership type is said to be virile, mobile, elastic and efficient if only they can work in harmony.

6 Disadvantages of Partnership. If the partners work in close and cordial co-operation, the business is bound to go up. But this is a very big IF.

(1) In actual practice the partners behave in a selfish manner, doing the minimum and trying to get the maximum out of it. In case of a mishap everyone blames the other. There are dissensions instead of harmony. The dreams of congenial comradeship are seldom realised. Nothing gets done on account of constant bickerings. There is no wonder that partnerships are short-lived.

(2) According to law partnership must be dissolved in the event of a partner's death, bankruptcy or lunacy. There is thus no continuity of existence.

(3) But the greatest handicap is the unlimited liability. Every partner has the right to bind all others. Folly and obstinacy of one partner can ruin all others. In case of failure the partnership debts can be realised from any of the partners and their private property can be attached for the satisfaction of creditors. No partner can say that he is only responsible for his share. The unlimited liability makes the policy of the firm timid and unenterprising.

(4) Further, the partnership resources are too limited to enable the partners to do big business. Obviously business of railway or shipping transport, insurance or iron and steel works could not be undertaken by a partnership.

This form of organisation cannot meet the requirements of modern industry.

7. Limited Partnership. The law allows a partner to get his liability for meeting the debts of the firm limited to a certain amount by agreement. But such a partner cannot participate in management. Also, even in limited partnerships, there must be some partners whose liability is unlimited. All the partners of the firm cannot limit their liability. This type of partnership has not been very popular.

8. Joint-Stock Company. The Joint-Stock Company is undoubtedly the most important type of business organisation today and it seeks to remedy the disabilities and the handicaps of the partnership.

Joint stock companies are of two types :—

(i) Private limited companies and (ii) Public limited companies.

9a. Private Limited Company. The minimum number of members is two and the maximum 50 exclusive of the employees. When a partnership business expands beyond the capacity of the partners to bear the losses, they can limit their liability by getting themselves registered as a private limited company. This device enables them to retain the control of business in their own hands and they can create salaried posts, generally well-paid, for themselves, their relatives and friends and get profits in addition. The scale of salaries may be fixed so high that much may not be left to be distributed as dividend. But this does not worry them as they have amply compensated themselves through salaries. Only those suffer who have been induced to subscribe to capital without having a voice in the inner councils. Such are the devices adopted by some unscrupulous entrepreneurs. But all are not such.

This form of organisation offers all the advantages of partnership: secrecy, promptness, self-interest leading to economy and efficiency without its disadvantages arising out of the unlimited liability. A private limited company is not subject to any restrictions regarding minimum subscription of capital before it can legally start business nor need it file with the Registrar of Joint-stock Companies any annual return or balance-sheet. It has, however, to work under some other restrictions. It cannot publicly or through a public advertisement of the prospectus invite the public to subscribe to its share capital. The shares are also not transferable.

It is a very suitable form for launching speculative enterprises holding out a prospect for high profits but not requiring finance. Most of the middle-sized industries are run in this manner and they are invariably converted into public limited companies finally, if the business goes well.

9b. Public Limited Company. A minimum of seven persons can form a public limited company and there is no maximum. Any seven persons, who intend to start a joint stock company for carrying on a business can do so by submitting to the Registrar, Joint-stock Companies, for his approval two documents (1) *Memorandum of Association* giving the name of the company, head office, aims and objects, denomination of shares and the amount of the share capital, and a declaration that the liability of the shareholders is limited and (2) *Articles of Association* giving the bye-laws of the company.

If the Registrar is satisfied that all legal requirements have been fulfilled, he will grant the certificate of incorporation. The company is registered but it cannot start business unless a certain minimum of percentage of the issued capital has been subscribed. This is to safeguard the investors lest a few gullible investors should be roped in and defrauded of their money by bogus company promoters. The minimum subscription will show that many more people have joined and it must be a genuine venture.

After getting it registered, the promoters of the company issue the prospectus, do a lot of canvassing and utilise the services of professional underwriters and sell the shares.

The share money is not paid in a lump sum, a small amount is paid with application, then a certain amount per share on allotment of shares and then further calls are made as and when the company needs.

Within six months of the allotment of shares, the promoters must call a general meeting of all the shareholders called the statutory meeting which elects the directors. But the election is a foregone conclusion. The promoters, who have floated the company and who know what is to be done and how it is to be done are naturally elected the directors. Once in the saddle, they show no inclination to quit. With sufficient number of proxy papers in their hands, they manage to get themselves elected every year. This is how the company gets going.

The company raises funds through the sale of shares and debentures. The student might well acquaint himself with certain terms used in connection with capital and the different kinds of shares.

10. Shares and Share Capital: Authorised, Registered or Nominal Capital. This is the amount of the capital with which the company is registered. The company is authorised to sell shares up to this amount and not more. Actually the capital raised is different in amount. It is, therefore, only a nominal capital. Only a part of authorised capital is issued to the public.

Issued capital. It represents the amount of share capital which the public is invited to subscribe, but the whole of it may not be sold.

Subscribed capital. It means the amount of share capital sold to the people, but some of the subscribers may not be able to pay for the shares they have agreed to buy.

Paid-up capital. It represents the amounts actually paid by the shareholders.

The following are the types of shares sold by a joint stock company :—

Preference shares. The holders of such shares are guaranteed the payment of a certain percentage on their capital before anything can be paid to the ordinary shareholders. Preference shares may be cumulative when the dividend on them goes on accumulating. They are paid when there are profits but their profits will go on accumulating, because their account will be credited even in the years when no profits are made. Preference shares may be non-cumulative in which case the shareholders will get dividend for the year when sufficient profits have been made. Then there are participating preference shares. Besides getting a fixed percentage, they also get further share in profits if the profits exceed a certain limit.

Ordinary shares. The holders of ordinary shares rank for dividend next to the preference shareholders. Preference shareholders will be paid first and then the remaining profits are distributed among the ordinary shareholders.

Deferred shares. They are also called founders' shares. The holders of these shares get profit only after the claims of the other classes of shareholders have been satisfied. These shares are generally kept by the promoters for themselves.

Joint-stock companies also raise funds by the sale of debentures. The holders of debentures are creditors of the company and not its shareholders. They must be paid interest, profits or no profit. This in brief is the organisation of a public joint-stock company.

11. Advantages of a Joint-stock Company. There are several advantages which can be claimed for this form of organisation : —

1. The company business is generally a large-scale business. Therefore it enjoys all the economies of large-scale production, internal and external, viz., specialisation of labour and machinery, commercial advantages in buying and selling, saving in rent, saving in advertisement costs, advantages of experiments and research, etc.

(2) Besides these, there are several advantages peculiar to the organisation itself. It is difficult to see how in the absence of such an organisation so much capital could be raised. Shares are of small denomination and they suit all pockets and temperaments from the cautious to the speculative. Even people of small means are enabled to participate in business undertakings otherwise these small amounts would have served no productive purpose. Hence large capital can be raised.

(3) The fact that liability is limited and shares are transferable induces many people to subscribe to the share capital. Thus small and scattered amounts of capital lying in remote parts of the country are mobilised and turned into productive channels. Habit of thrift is strengthened. Many businesses like transport would have been impossible without large accumulation of capital. No entrepreneur of proved ability need suffer for lack of capital. Business can be expanded almost at will. The great problem of capital supply has been solved satisfactorily. It is only by this means that businesses requiring large initial capital outlay have been tackled.

(4) The limitation of liability enables risk to be taken and thus many new fields of business are opened out. The risk of failure is insured and actual loss, if any, is widely distributed among numerous shareholders.

(5) From the point of view of the individual investor, too, it has great advantages. Not only is his liability of the payment of the debts of the company limited, but he is enabled to spread out his investment over a number of concerns. He need not place all the eggs in one basket.

Further, he is not wedded to the company for good. Whenever he wishes, either because he thinks that it is a bogus concern or because he needs money, he can dispose of his holdings through the stock exchange.

(6) Unlike the partnership the company is a legal entity. It is a legal person apart from the shareholders or directors. It can sue and can be sued upon. It is independent of any particular person and enjoys a perpetual existence. This is a great gain. The business now need not come to an end when the original entrepreneur makes an exit. Further, it is on account of its everlasting existence that investors can be persuaded to invest money even though for years there is no prospect of profit.

(7) Separation has been effected between the capitalist and entrepreneur, and the consequent specialisation has enhanced productive efficiency, because formerly the capitalist lacked business ability whereas the entrepreneur lacked capital.

(8) The management is democratic, efficient and economical. The directors who run the business are elected by the shareholders and may not be re-elected if not found satisfactory. They are supposed to be people having wider vision, administrative ability and business acumen. Their expert advice and guidance is available to the company at a very moderate cost. They do not get any salaries but only a fee for attending the meetings of the Board of Directors.

12. Disadvantages of a Joint-stock Company. There is the other side too.

(1) The management is democratic only in theory; it is actually oligarchical. The directors are practically self-appointed and they remain there as long as they choose.

(2) Some of the directors are unscrupulous and exploit the unwary investor. They use inside knowledge for their own benefit. They manipulate matters in such a manner as to buy shares when the company is going up and unload when it is going down.

(3) Fraudulent publicity deceives the public. The rosy picture given in the prospectus is sometimes utterly false.

(4) The directors are often lawyers or doctors and have no business experience or knowledge. Their only qualification is the share qualification. Out of 175 directors of cotton mills in Bombay in 1925 only 11 had received technical training. "The choice of directors is a leap in the twilight."

(5) Business is depersonalised. The owners of business, i. e., the shareholders, are concerned only with profits. The welfare of the employees is utterly neglected by the paid managers who express their helplessness on the plea that the shareholders clamour for dividends. This loss of human touch is a net loss and the business becomes purely mercenary.

(6) The liability being limited and the shares being transferable, the shareholders take no interest in the company. Few of

them attend the shareholders' meeting. Their apathy and indifference throws all powers in the hands of a few directors, who indulge in nepotism. Law is often evaded. Desire for personal gains rules.

(7) Sometimes the directors launch rash enterprises because it is easy to play ducks and drakes with other people's money.

(8) The organisation is too ponderous and unwieldy. It cannot take quick decisions. The policy is often vacillating and full of compromises. It is only suited to businesses which can be reduced to set rules, which are fool-proof and knave-proof. It is not fit for pioneering work or where changing conditions require constant changes in policy or production or where customers are won with difficulty and lost at the slightest pretext.

Weighing all these pros and cons we come to the conclusion that in spite of defects this kind of organisation is capable of doing much good. Its services in the economic field are great. In the absence of the joint-stock principle industrial development and efficient exploitation of the natural resources of the country would not have been possible. It has proved to be a powerful and an efficient engine of production.

13. Holding Company. This form of organisation represents no new type. It simply means an arrangement by which one company comes to acquire and control interest in another. The device generally adopted is the purchase of the majority of the shares of one company by another. The company which buys the shares and thus comes to control another company is called the *Holding Company*. It holds or contains the other in itself, as it were. And the company whose shares have been so acquired and which comes under the control of another company is known as the *subsidiary company*.

Sometimes a company is formed for the avowed purpose of purchasing the bulk of the shares of two or three going concerns. The holding company just buys the shares and controls those concerns but does no business itself. In some cases the holding company is itself a going concern, doing some business of its own, but decides to buy out one or two other companies which may be competing with it or because some other economies or benefits are expected from holding them.

14. Advantages of a Holding Company. The device of a holding company is found very useful in reaping *economies of integration*. Advantage is taken of the technical and expert staff of the other company; common purchases of stores and materials can be arranged with all attendant economies. There are administrative economies of having practically a common management; patents can be pooled and all the combined resources used to the mutual advantage of the two concerns. When trustification is not found feasible on account of the unwillingness of certain units to efface themselves, the holding-company device proves quite handy and is as advantageous as a trust.

It is even better than cartellisation (forming of cartels to be explained later because a cartel lacks permanence and stability). It does not enable a long range policy to be pursued). It is not an easy matter to retain the fidelity of the various units that form the cartel. They always work with mental reservations.

15. Drawbacks of a Holding Company. There are less commendable aspects of the holding company too. The controlling group may just have a bare majority of the shares and ride roughshod without caring for the big minority of the shareholders. Out of the share capital of one lakh of rupees, they may purchase 50,100 and then do whatever they like. The shareholders representing the stock of Rs. 49,900 are sacrificed. It is not a question of minority shareholders of one or two companies suffering. This device is contagious; it spreads its tentacles far and wide and builds up a long chain of satellites or subsidiaries. The shareholders' money is used but they are deprived of any voice in the affairs of the company. It is so unfair and undemocratic.

There is another drawback of the holding companies from the public point of view. If the subsidiaries happen to be private companies, they are under no legal obligation to file any returns or balance sheets with the Registrar of Joint-stock Companies. Their balance sheets will, of course, be prepared but holding company may treat them as confidential. They may not disclose how the subsidiary company is faring in business. It may have incurred a heavy loss but the directors of the holding company may not give a clear and correct idea of the state of affairs. The condition of the holding company depends on the condition of the subsidiary. But the holding company may prefer to observe prudent silence about the affairs of the subsidiary and thus give a wrong impression to the public from its own balance sheet.

In Germany holding companies are very common. The banks maintain financial interest in several industrial concerns and there is interlocking of directorates. It is a rare phenomenon in India. The nearest approach is the managing agency system under which a private firm of managing agents, generally a family concern, operates many different types of concerns, e.g., Dalmias have their own insurance company (Bharat); their own bank (Bharat Bank), cement factories, sugar factories, paper mills, Airways, etc. This system makes available economies of integration both in distribution and production.

16. Managing Agency System. The managing agency system is a curious appendage to the joint-stock organisation in India and it fundamentally alters its character and working. Almost every joint-stock company in India, except in the field of banking, has a managing agency attached to it. Instead of a manager or a managing director managing a concern, the work of management is entrusted to a firm called the managing agency.

The existence of the managing agency in India is not a mere accident. There are special reasons which gave rise to the growth

of this system ; the shyness of Indian capital and consequent inadequacy of the amounts raised from the investing public, the late development of joint-stock banking, the absence of special financial institutions like the issuing houses in England, the lack of competent directorate, the dearth of managerial ability, and the practices of the commercial banks relating to bankers' advances are some of the causes that have conspired to throw industrial enterprises in India into the arms of the managing agents.

17. Functions of the Managing Agents. There are several functions which the managing agents have taken upon themselves :-

(1) They act as agents of their concerns in the purchase of materials and machinery, the sale of finished goods and insurance of plant, buildings and stock-in-trade.

(2) They do the pioneering and pave the way for the formation of the concern. They do the preliminary prospecting and necessary research so that the concern may be brought into existence.

(3) They carry on the routine business of the concern. Their function does not end with its birth ; they carry on day-to-day operations as a manager would do.

(4) But the most important function which is responsible for their continued association with the concern is the financial assistance that they render both for block and the working capital. Not only do they push the sales of the shares, but they themselves buy the bulk of the shares. They lend substantial amounts themselves to the company and also arrange for finance from the banks when their personal guarantee is almost invariably necessary. It is also the reputation and the influence of the managing agents which induce some moneyed men to place their money with the mill as a deposit.

The managing agents in Bombay had to find Rs. 10 crores and at Ahmedabad Rs. 360 lakhs for the balance of fixed capital expenditure and working capital¹. An analysis of funds secured by textile mills in Bombay in 1936 reveals that of the total loans, secured and unsecured, the advances by the managing agents came to about 76%.²

The managing agents are, in short, promoters, financiers, managers, purchase and sales agents all rolled in one.

18. The Terms of the Managing Agency. For the services that the managing agents render to their respective concerns, they have been rewarding themselves in a variety of ways. Their remuneration takes usually the following forms :

- (a) a fixed monthly office allowance ;
- (b) a fixed minimum commission calculated monthly, yearly or half yearly ;
- (c) a fixed percentage on profits ;
- (d) a fixed percentage on purchases, sales or production.

1. Report of the Central Banking Enquiry Committee, 1931, Vol. 2, P. 387.

2. Report of the Textile Labour Enquiry Committee, 1938, P. 53.

The office allowance is intended to cover the expenses of the clerical and secretarial establishment. The fixed minimum commission guarantees to them a fixed minimum income irrespective of the financial results of the working of the concern on the ground that a manager must be paid his salary, profits or no profits. Unless a fixed minimum is assured few would take the risk of launching a venture. The commission on profits brings about a closer identity between the interests of the shareholders and those of the managing agents. But the other commissions, *viz.*, on purchases, sales or production, may enrich the managing agents at the expense of the company.

According to the Indian Companies (Amendment) Act, 1936, the remuneration of the managing agents is fixed as a percentage on net profits subject to a fixed minimum in case of absence or insufficiency of profits. Any other form of remuneration on any variation of the terms has to be sanctioned by the shareholders.

19. Merits and Demerits of the Managing Agency System. The managing agency system confers the following benefits on the concern they manage :-

(1) Expert, reliable and continuous management is provided by the managing agents.

(2) Advantages of integration or horizontal combination are available to the concerns under one managing agency. A great economy is effected when purchases or sales are effected through a common agency. The office establishment is also economically organised, as one central office serves a number of concerns. There is a saving in office rent too. Various economies internal and external are realised.

(3) Financial co-operation is rendered possible by lending the surplus funds of one concern to another.

(4) The system combines the advantages of a partnership type of business organisation with those of the joint-stock type. The managing agency firm is either a partnership or a private limited company practically a family concern. By the association of the managing agency firm with a joint-stock company the keen self-interest, initiative and virility, resourcefulness and adaptability of the partnership are harnessed to the service of the large-scale organisation of the joint stock companies.

(5) The financial assistance rendered by the managing agents to their concerns has been of great value. They have often saved their concerns when financial aid could not come from any other source. In the absence of initial push given by them many concerns would not have seen the light of the day and many would have withered away in adversity.

Demerits. But several evils have arisen on account of undue concentration of control of a joint-stock company in the hands of a few persons.

(1) The interests of the shareholders are subordinated to those of the managing agents. The terms of the managing agency are sometimes such that it is possible for the managing agents to swell their earnings, though the company is actually losing.

(2) There are ample opportunities for fraud and exploitation and the unscrupulous managing agents have not been slow to make the most of these opportunities. The losing bargains are put into the account of the company and the profitable ones are treated as their private business. They receive secret and illicit commissions.

(3) The interests of the numerous concerns under the same managing agency are not always identical. In case of a clash between such interests some companies gain at the expense of others.

(4) The system has hindered the growth of independent directorate. The directors are mere figure-heads or so many rubber stamps. They play a second fiddle to the managing agents. Mr. J. A. Wadia in his evidence before the Tariff Board in 1927 stated that if the directors took an active part, they had to go. And Mr. Wadia was a director in 13 cotton mills. The directors are thus dummies.

(5) They have got too many and too great a variety of concerns under them and they cannot do justice to all. In the words of Bihar and Orissa Banking Enquiry Committee, "they have got too many irons in the vast and uproarious fire of their activities." Messrs Andrew Yule and Company manages 54 concerns including jute mills, coal-mines, transport companies, sugar factories and many other miscellaneous concerns.

(6) The managing agents are mostly drawn from the merchant classes and are generally ignorant of industrial technique. They have not been able to further industrial development in India. They have devoted their attention more to commercial activities.

Conclusion. Our conclusion is that there is nothing wrong in the system. It has potentialities both for good and evil. In the hands of honest, efficient and conscientious agents, it has produced remarkable results, whereas in the hands of unscrupulous agents, it has led to disgusting evils. We endorse the view of the Indian Industrial Commission that the system has a far greater list of successes to its credit than can be shown by ordinary company management under individual managing directors¹. All the same it must be conceded that the system is very expensive and our industry can ill afford to bear its cost. As an industrial concern becomes well established and the business has been reduced to a routine, the managing agents' risk is correspondingly reduced and their remuneration may well be scaled down.

20. Monopolistic Organisation. Monopolistic organisations like trusts, cartels, rings, pools and combines play a dominant role in modern industrial structure. We propose to devote a separate chapter to the discussion of monopolies. Here it may be said that

1. Vido Report, P. 13.

they take a variety of forms, sometimes temporary and sometimes permanent. The area of operation may be a district, a country or the whole world. Some of these are gigantic concerns. The essential feature of the monopolies is that they seek to eliminate competition, partially or wholly. Having control over the supply either by virtue of their owning some essential material or because it is not so easy to start a new concern of huge dimensions, they seek to impose their own terms on the market and thus maximise their profits.

After the War (1914-1918) combination movement spread as a part of a wider movement called Rationalisation. In several countries like Germany and Japan the state fostered the growth of such combinations. Stahlverein, a giant concern in Germany, was the result of fusion of six iron or steel companies. It owned 52 furnaces with a total capacity of 9.25 million tons a year. The Japan Cotton Spinners contained 60 spinning companies out of a total of 74 and controlled 97% of spindlage in the industry. Oji Paper Manufacturing Company of Japan controlled 95% of the industry.

During the last depression, the British statesmen, too, who had always been the votaries of *laissez faire* doctrine, started encouraging co-operative and collective action on the part of industrialists as a means of fighting the depression. The Lancashire Cotton Corporation by 1931 had acquired a control over 107 companies.

The current belief is that such combinations are not necessarily inimical to public interest. On the other hand, they are productive of much good to the community. Imbued with a public spirit and turned into semi-public institutions they can be used for the furtherance of national interests. Cartellisation has been often recommended in India for cotton mills or jute mills. This is the only way that reorganisation of industry can be effected so that it is better able to meet the menace of foreign competition. Our cement industry saved itself from ruin by this device.

Besides the advantages of joint-stock organisation and the economies of the large-scale, the monopolistic organisations have economies of their own arising from the fact that wasteful competition has been eliminated. Several economies flow out of integration and co-ordination. Much duplication is avoided and all the resources are used to the best advantage. The community is bound to share some of these benefits. Monopolistic organisation is considered a definitely improved type on an ordinary joint-stock organisation. It is a pity that it has not made much headway in India.

21. Co-operative Organisation—Producers' Co-operation. As distinguished from the ordinary 'capitalist' enterprise there is the co-operative enterprise. Being convinced that they could themselves run the industry without the aid of the entrepreneur, who in the workers' opinion devoured the lion's share of profits and did precious little work, the workers have thought of taking the entrepreneurial work upon themselves. They contribute a little capital and borrow the rest, elect their own foremen and managers and

employ some staff where necessary and start an undertaking. After paying all expenses, interest on capital, salaries and wages, the profits are divided among themselves. Thus they earn wages as well as get profits. A fine idea indeed! This is one type of co-operation called the *Productive Co-operation* or *Producers' Co-operation*.

22. Limitations of Producers' Co-operation. Such experiments have invariably failed. The reason is not far to seek. With the disappearance of the entrepreneur, profits also disappear. The entrepreneur is not a useless specimen of humanity as the workers are disposed to think. It is his initiative, power of direction and organising ability which produce profits and turn a losing concern into a profitable one. He has his price and gets it. But the workers are not in a mood to pay this price and must remain without profits.

Their managers are generally ill-paid. They cannot command the services of first-rate men at the salary they are prepared to offer.

These elected foremen are not able to enforce discipline over their own people. The workers look upon them as persons just like themselves and are not much in a mood to listen to their instructions or to carry out their orders.

✓ Everybody's business is nobody's business. Little wonder that there are no profits. The workers have not, therefore, been able to meet the entrepreneur's challenge that he alone can carry on enterprises to a successful conclusion.

23. Consumers Co-operation. There is another type of co-operation which has a long record of successes. It is *consumers' co-operation* or *co-operation among consumers*. The arrangement is that the consumers of a locality contribute capital in small shares and start a store of their own. They buy goods from wholesalers like other dealers and sell these goods to their members who are the consumers at the ordinary market rates. At the end of the year profits are ascertained and are distributed among the members in proportion to their purchases or, what is more simple, in proportion to the share capital. Generally the share capital is equally contributed and profits are, therefore, also equally divided among all.

The elected managing committee manage the affairs generally honorarily. The management is, therefore, democratic and honorary. The business is very simple and does not require a great commercial insight and ability to run it. The store keeps a few standard qualities of goods and does not attempt to provide a wide selection. It is consumers' own shop. They are, therefore, not very exacting in their demands and are easily satisfied. No overhead charges for advertisement and canvassing need be incurred. The market is assured.

These co-operative stores have been a splendid success and some of them count thousands among their members. In several cases they have not contented themselves with merely retailing consumer's goods but have added on their own manufacturing organisations. But it is to be remembered that they are not run on the lines of pro-

ducers' co-operation described above where the employees share both in management and profits. On the contrary, they are run on ordinary capitalist lines employing high grade managers working under the control of able committees.

The co-operative movement has proved specially suited to agriculture and allied occupations. It was successfully applied first in Germany and Denmark, and it has now spread to almost every country. In India co-operative departments are functioning in every province. In 1941, there were in all 142,000 societies with 64 lakh members and working capital about Rs. 109 crores. Mostly these are agricultural credit societies but non-credit and non-agricultural societies are also being established. Since the Government of India, in 1934, gave an annual grant of Rs. 5 lakhs for the development of handloom industry, weavers' societies have been established in every province.

24. State Enterprise. In every country there are many public undertakings run by Central or Provincial Governments or local bodies like municipal corporations. Postal and Telegraphic arrangements are generally under the Central Government; and public utility services like water-supply, gas, electric supply or tram or bus service are managed by municipal corporations.

The organisation of the State enterprise is on the same lines as private enterprise with the usual paraphernalia of general manager, foremen, works manager, accountants, treasurer, departmental heads and so on. The work is done in generally the same manner as in a big joint-stock company.

But there is this fundamental difference that all the employees are Government servants with fixity of tenure and prospect of getting a pension on retirement, whereas capital is provided from the State coffers which comes ultimately from the tax-payers. The profits, if any, too, go to the State, again to the relief of the taxpayer.

25. Merits and Demerits of State Enterprise. State enterprise has certain advantages not open to other forms of business organisation. The credit of the Government stands higher than any private individual or company. The State has therefore a special facility in raising capital. The investors are only too willing to invest in Government securities. Thus the rate of interest which the government has to pay on its loans compares very favourably with those at which private corporations have to borrow.

Further, government is in a position to command talent of all types. Government service attracts first-class brains. There is a certain glamour about government service. This is especially the case in India. Thus from the point of view of the human factor the State enterprise is favourably placed.

The State enterprise is generally a monopoly. It has all the advantages of a monopoly. The custom is assured. Expenditure on

publicity is unnecessary. In a country like India people have greater faith in the quality of the government-produced commodity or the service rendered by the government. Better service at less cost is the usual rule in a government undertaking.

In short the State resources being vast a State enterprise is on a much better footing.

Demerits. But the economists are generally agreed that governmental machinery in the matter of running a business compares very unfavourably with private management.

There is what is called a 'Government Swing' in the axe of the Government employee. The government manager, whose job does not depend on the sweet will of the immediate boss and who is getting a fixed annual increment and who will get promotion according to seniority, cannot be expected to show the same degree of initiative or hard work as the manager of a private company who may receive notice to quit any fine morning if the directors are convinced that he is not doing his best.

A Government employee will not be much interested in lowering costs or improving the methods because he himself will gain nothing thereby.

The State employee can flout the senior officers if he has no ambition to rise. At the most he will be transferred or his increment stopped if it comes to the worst. But it is not so easy to remove him. He does not consider himself the servant of any particular person but the servant of the impersonal State and that makes all the difference.

In a government-managed enterprise routine replaces responsibility. There is the tyranny of the desk. There are exasperating delays. A paper has to pass through so many hands, none making any material alteration.

Frequent transfers, nepotism and entry into service by the back-door, merit being not necessarily the test of promotion are some of the drawbacks in government enterprise.

If there are losses nobody seems to bother. There is no counterpart of the shareholders whom the directors have to face every year. The tax-payers are dumb. They do not pay taxes specially for any particular purpose and nobody really feels whose money has been lost. Their representatives in the legislature will no doubt raise hue and cry, yet the government usually has a comfortable majority and the caravan continues to move on.

It is, therefore, suggested that only safe businesses, which are of a strictly routine type, where there is no question of winning the markets and striving to maintain them, and which enjoy practically a monopolistic position, can be entrusted to the State. They have to be so entrusted because public interests are involved so that the idea is not to make a profit but to ensure purity and regularity of service. The government represents the general body of consumers

and as such takes upon itself to serve them collectively rather than leave these services at the mercy of the profit-grabbing entrepreneur.

We feel, however, that government weakness in business has been exaggerated. In big business, whether owned by government or private companies, the same red-tapism rules. There is the same lack of initiative and inertia.

The success of the Russian experiment has exploded the myth of governmental inefficiency. The achievements of their five-year plans may be described as sensational. The world now stands aghast at the unparalleled victories that attended the Russian arms. People will now think twice in condemning the Russian methods which mean the State enterprise. The peoples' State can inspire and galvanise its citizens so that entirely new values are created and it is no longer possible to argue on old premises. The sphere of State enterprise is bound to extend further and further.

Even in England, the traditional home of *laissez faire*, things are going to move pretty rapidly with the Labour Party in power. They have already announced their intention of nationalising the Bank of England and the coal mines. But this is only the beginning. Death-knell of capitalism seems to have been sounded.

26. Production Under a Dictator. We may finally see what organisational changes we can expect if an economic dictatorship were established.

Under the present economic system working under the *laissez faire* doctrine, we have seen that functioning of the price-mechanism tends to bring about a harmony between consumers and producers. The multitudinous decisions of isolated entrepreneurs are somehow reduced to a system by the price steam-roller. The consumer is the king and that producer who is able to give him the maximum satisfaction will be able to enjoy the maximum profit. The entrepreneur will try various permutations and combinations of factors to hit on the most economical combination so as to maximise his profits. Through a great deal of reshuffling the various factors of production will be so distributed among the various industries that, according to the valuation of the consumers, the marginal product of each factor is the same in every industry in which it is employed. The ultimate arbiter is the consumer. All the productive resources of the community are utilised in the making of that assortment of goods and services which the consumer prefers most.

Things are different under a dictator. He will have his own scale of preferences, wise or foolish, and this will take the place of consumer's scale of preferences. The consumer loses his sovereignty. He is dethroned. Under economic dictatorship that assortment of goods and services will be produced which the dictator, and not the consumer, prefers most. It is his valuation which is going to take effect. The phrases "most economical combination," "maximum profit," "maximum efficiency," "maximum satisfaction," all lose their meaning. They will be dismissed by him as so many vague statements and meaningless platitudes.

How will he allocate the factors of production among the various uses? He is also faced with the scarcity of means in relation to wants. If the dictator were also a magician and had "Alladin's Lamp" in his possession, the things of course would be different. But we assume that he is endowed with no supernatural powers and that he is also helpless in changing the fundamentals of human nature one of which is that human wants are unlimited. He cannot, therefore, escape from a situation in which he finds that his desires are without a limit, whereas the means at his disposal to satisfy these wants are strictly limited. He is thus compelled to choose.

The dictator must decide which wants to satisfy and which to forgo. But his standard of judgment will be his own. There is every possibility of an eccentric or ludicrous choice. The Indian dictator for example may decide that a *langoti* (loincloth) is sufficient by way of clothing and sufficient number of them can be made by the village weaver. All cloth mills may be scrapped and much of the land devoted to cotton growing may be turned into pastures so that people should have sufficient number of milch cattle to supply themselves with milk and milk products. Production of furniture may be stopped, a few charpais are enough; the banyan tree can serve as a sitting room. Educational equipment may be on Santiniketan model. Simple living and high thinking! Herr Hitler is said to have preached to the German nation "Guns are better than butter?"

Having decided upon the assortment of goods and services that he prefers to place at the disposal of his people, he will then proceed to allocate the factors of production among these industries. The factors which are free gifts of nature will be used with other factors so as to maximise their output and the free factor will be used to such an extent that its marginal productivity is zero.

But few factors belong to that category. Most of the factors are actually scarce. The dictator will equimarginalise their productivities in the various uses. Each factor will be distributed among the various industries in such a manner that according to the valuation of the dictator, its marginal product is the same in every industry in which it is employed.

The rule seems to be the pretty same as the one applying in competitive economy. But the qualifying phrase, according to the valuation of the dictator makes all the differences. We know that the marginal utility (for productivity) is subjective; it varies from individual to individual. The dictator has his own subjective valuation which may be a queer one. Hitler had ordered the German women to give up jobs and attend to domestic duties. A pleasure-loving and romantically inclined dictator may order them to have sun bath; air bath and sea bath on beaches most of the day and

to provide fuller satisfaction in the future. For the development and improvement of the human material, he may arrange for health schemes, improve sanitation and medical arrangements and provide for wider diffusion of technical and general education. Large amounts of money may be spent on scientific research. He may supply ample quantity of necessities of life. He alone will decide to what extent present gratification will be sacrificed for providing fuller and richer life in the future.

The dictator may not take advantage of standardised production of consumer's commodities and, thinking that variety is the specie of life, he may decide to offer a greater variety even though the cost of production may be higher.

He will also consider to what extent the indivisible factors of production should be utilised. Fuller utilisation of an indivisible factor may bring an increasing return, *e.g.*, the trebling of some factors may increase the output six times but he may forgo this advantage, because he prefers to utilise the factors in their present uses.

It is not also necessary that all his production units will be of the optimum size in the accepted economic sense. Much depends on how much of a particular good and service he wants to produce.

He may have his own ideas on population. He may offer a premium on increased birth rate, order early marriages, compulsory remarriage of widows or he may issue strict orders against procreation and fix maximum number of children for each family.

It is needless to multiply, by way of illustration, the economic problems he will have to face and tackle. The use of every acre of land, every human being and every rupee of nation's capital and every factor of production will be determined by him. He will fix the quality and quantity of each conceivable article to be produced. Regimentation of production will be followed by regimentation of consumption. Only a superman can attempt such a task. We may be sure that there will be reorientation even of economic theory. Some economic theories may be turned topsy-turvy.

The task of economic dictatorship is formidable but not impossible. The dictator need not go whole hog. He has not to begin on a clean slate. He can tackle his problems piecemeal and modify the existing economic system bit by bit. A sort of economic dictatorship is functioning in Russia, it functioned in Germany and whatever else one may think of them but none may question their efficiency.

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CHAPTER XIV

MONOPOLIES

1. Introductory. We have studied the various forms of business organisation. But there is one form of organisation which has assumed great importance in modern times, viz., the monopolistic organisation or, simply, a monopoly.

2. What is a Monopoly ? It sometimes happens that a producer or a group of producers come to acquire a more or less effective control over the supply of a commodity and they are thus enabled to exercise a perceptible influence over its price. They will be said to monopolise the commodity or to constitute a monopoly. The essence of a monopoly is the ability to influence the price free from the fear of rivals. It implies an elimination of competition, complete or partial. Monopoly, therefore, is an anti-thesis of competition. Whenever competition is absent, wholly or partially, we say there is a monopoly.

3. Monopoly is Seldom Complete. But it is very seldom that competition is completely eliminated. Just as perfect competition is rare, an absolute monopoly is also something very rare. As a rule actual competition is imperfect competition. The difference between competition and monopoly is not of a kind but of a degree. Monopoly may be properly described as a monopolistic competition or an imperfect competition. The G. N. I. T. is said to have a monopoly of local bus service in Delhi. But the monopoly is far from perfect. Though there is no other bus service operating within the boundaries of Delhi, yet there is competition from other means of conveyance. Similarly, the Delhi Electric Supply Company is said to enjoy a monopoly of electric supply in Delhi, yet there are other sources of light, like gas, available. Absolute monopoly is not to be met with.

The monopolistic or "imperfect" competition arises from the use of trade marks by which device the manufacturers are able to differentiate their own products from those of others, and this insulates them from the market competition. It is also the results of costs of transport or of the fact that some customers knowingly or unknowingly pay higher prices for a product at a shop.

In the economic jargon the term monopoly refers to various forms of combinations among manufacturers like trusts and cartels.

4. The Economic Significance of a Monopoly We have seen that Economics is concerned with the disposal of scarce means, which are capable of alternative uses, for the satisfaction of multiple ends. But wherever there is a monopoly this scarcity is all the more accentuated and the consumers are compelled to pay more than they would otherwise have paid. Those who happen to control

the supply are able to create an artificial scarcity. The economic significance of monopolies, therefore, lies in the reactions caused in certain branches of expenditure by high prices due to artificially contrived scarcities of certain resources, especially when these happen to be commodities in universal use.

5. Kinds of Monopolies. Prof. Chapman classifies monopolies as under :—

(1) *Natural monopolies.* Natural monopolies are the outcome of natural scarcity. A certain territory happens to possess a natural control over the supply of a commodity. Africa has a monopoly of diamonds, Chile of sodium nitrates and India of jute.

(2) *Legal monopolies.* Sometimes a producer, or a group of producers, comes to control the supply through law. A man invents a machine and gets it patented so that others are debarred from making it. This is the case of a legal monopoly.

(3) *Social monopolies.* The term social monopoly refers to electric concerns, gas companies and other public utility services. It is obviously uneconomical, from the social point of view, that there should be two rival companies in the same place for the supply of gas or electricity. The public utility services are created monopolies on social grounds and are called social monopolies.

(4) *Voluntary monopolies.* In economic discussions we are mostly concerned with this group of monopolies. When several companies enter into agreement voluntarily to restrict supply and to control price, it is a case of voluntary monopoly. Such monopolies do not arise from social necessity or legal restrictions or natural factors. They are created by the business men themselves; they are known as combinations which may be *horizontal combinations* as between concerns engaged at the same stage of production, e.g., combination between spinning companies or it may be *vertical combination* which combines all processes from the production of the raw material to the marketing of the commodity under the same management. A combination between spinning and weaving concerns will be a vertical combination.

The monopolistic agreements take different forms, some of which are :—

✓(a) *Reduction or regulation of output.* When a business is passing through hard times the producers take a concerted action to avert the catastrophe and they undertake to reduce the output or regulate it to suit market conditions. The Indian jute mills entered into such agreements during the last economic depression.

✓(b) *Fixation of price and other terms of sale.* In order to avoid cut-throat competition minimum prices to be charged by the rival producers are fixed. Lest they should be able to evade these agreements by granting other concessions like freight, credit and discounts, such agreements also ensure uniformity in such terms.

✓(c) *Division of territory.* This is another device to eliminate

✓(3) *Patent Rights.* Exclusive legal privilege to make an article or patent rights, as it is usually called, is another source of monopoly power.

All modern States seek to encourage inventiveness in their citizens. If somebody invents a machine or discovers a new formula of making a commodity, he can get it patented. He will then have the sole right of making that commodity. Even if the commodity is not new the producer can give it a trade mark to differentiate it from other similar commodities. The law will not allow others to use that trade mark. In this way the monopoly rights are preserved.

But these rights are enjoyed within the State. Only the citizens of that particular State are forbidden to violate these patent rights. People in foreign countries may produce them. But the State can protect its own citizens from such encroachments either by totally prohibiting the entry of such goods or by imposing a heavy import duty. These protective measures foster monopolies. Tariff is said to be the mother of trusts. Protective duties facilitate the formation of monopolies and help to maintain them. The sole legal right to make an article or to use a process or a formula constitutes thus the foundation of monopoly power.

7. Types of Combinations or Voluntary Monopolies. There are several well known forms of business combinations the chief of which are the following :—

Trust. When several companies amalgamate and create a new company altogether and efface themselves, then they form a trust. The companies joining the combination completely lose their entity and entirely a new concern under a new name is created. It may also be called a merger.

All the existing cement companies of India formed a merger in 1936 under the name of A.C.C. (Associated Cement Companies of India). The constituent companies dissolved themselves and in their place one concern was formed. They merged themselves into this new concern, which purchased all their stock and equipment. The trust institutes a unified control over production and distribution.

Kartel. But in case the corporations joining a combination do not wish to lose their separate entity but wish to continue functioning separately surrendering only certain functions to a newly formed organisation, then it is called a kartel. It sometimes happens that some concerns continue to function as separate producing units under their managements and yet hand over their output to a common selling organization. The Indian sugar mills formed an All-India Sugar Syndicate in 1936 and entrusted to it the marketing of all the sugar produced by them. The term kartel refers to such arrangements.

Certain differences between a Trust and a Kartel may be noticed. In the case of a Trust one new concern replaces the constituent corporations whereas in a Kartel they retain their separate existence.

In a trust both production and distribution are under one centralised control, whereas in a kartel only distribution is subjected to a central control but production is conducted under separate managements of individual firms. The trust is a permanent organisation, the constituent firms having effaced themselves completely and irrevocably; on the other hand, a kartel is generally short-lived. The firms joining the kartel are constantly looking to their own separate interests and leave the combination whenever it suits them.

In some respects a kartel is superior to a trust. It is more flexible, leaves the producers free to make their arrangements as efficiently as they can and there is little danger of over-capitalisation from which a trust invariably suffers.

8 Merits and Demerits of Trusts and Kartels. / Trusts and kartels are able to reap all the economies of scale, *viz.*, economies of specialised and expert management, of specialisation of labour and machinery, of buying and selling, of rent and publicity, etc. They can use modern and costly machinery, spend large amounts on research and experiments.

2 They can ensure a regular supply and face bad times with confidence.

3 They can use inventions and trade marks of all the members.

4 They are also joint-stock concerns and, therefore, all the benefits of joint-stock enterprise are open to them, *e.g.*, democratic, flexible and efficient management, large capital, limited liability and transferability of shares, etc.

But besides these two sets of advantages, they enjoy certain other advantages by virtue of their monopolistic position. As such they are able to effect special economies in buying and selling. Being in a monopolistic position they generally charge higher prices and, by offering a large custom, they can wrest special concessions in all their purchases.

6 As producing units, too, they can attain higher levels of efficiency, because they generally command superior skill and can afford to spend lavishly on research.

7 On the distribution side they can arrange matters in a very economical manner, as they are not under the necessity of spending large amounts of money on publicity, there being no rival in the field.

(Evils.) It is for the purpose of reaping these advantages that combinations are formed. But there is the less worthy side also of the activities of Trusts and Kartels. Most of the evils of Trusts and Kartels arise from their abuse of the monopoly power. They ruthlessly crush their rivals and deprive the community of the contribution they might have made towards its welfare.

They inflict unfair terms on their customers and exploit the consumers.

Not infrequently they accord discriminating treatment to their customers in different areas, favouring some at the cost of others.

- 4 They bribe the legislators and thus lower business morality.
- 5 By preventing the entry of new rivals into the field they stand in the way of economic progress.
- 6 There are also dangers of over-capitalisation.

9. **Some Other Forms of Combinations.** Besides Trusts and Kartels, there are several other forms of combinations : (a) *Holding Company.* We have already discussed the way in which a company comes to acquire a controlling interest in another company. The Standard Oil Company of New Jersey is said to have controlled about 40 oil companies in 1911.

(b) *Pool.* The term pool generally refers to agreements for dividing the markets, sharing profits and limiting the output. They are very common among ice factories. Their popularity is due to the fact that the arrangements are very flexible; they are easily formed and they afford a very desirable control over prices and output. But their chief disadvantage is that they are temporary and the arrangements lack stability. Disputes are very frequent and they are as easily and quickly dissolved as they develop.

(c) *Ring.* The combination among the shippers is generally known as a "ring" or a "conference". The shipping companies get the better of their rivals through devices like deferred rebate system.

(d) *Corner.* The term corner refers to the attempts at controlling the supply of a particular commodity. If a Marwari Seth or a group of them try to buy the entire Indian crop of cotton in a season so that they may be able to charge a very high price, it will be called a corner. In view of the improved means of communication and transportation such attempts are foredoomed to failure these days.

10. **Discriminating Monopoly.** No monopolist charges a uniform price. Railways do not charge the same railway fare from all passengers travelling between two places nor do they charge the same freight per maund on all types of goods they carry. Weight for weight the silk merchant has to pay more than the coal merchant. The Electric Supply Company keeps an elaborate tariff, i.e., different scales of rates. All these are instances of discriminating monopolies. The following are the main forms of discrimination :—

(a) *Discrimination Between Individuals.* The shop-keepers generally charge more from a well-dressed customer.

(b) *Discrimination Between Classes.* A doctor may charge a higher fee from rich patients. A railway company divides its passengers into different classes and charges from each a different fare.

(c) *Discrimination Between Purposes.* The Electric Supply Company charges different rates for the consumption of electricity for different purposes. It charges less from industrial consumers than from the domestic consumers.

(d) *Discrimination Between Places.* The monopolist sometimes charges different prices in different regions or districts. Sometimes a lower price is charged in a foreign market than in the home market.

If discrimination is to be effective then it should not be possible for the goods sold in the cheaper market to be transferred to the dear market. For example goods dumped abroad should not be resold in the home market.

The monopolist is able considerably to increase his profit by charging discriminating prices. Each purpose or each class constitutes a market and from each class or for each purpose he tries to extract the maximum price. Thus if a uniform price were charged the aggregate profit would be much less, for some would pay less than they could or would.

11. Dumping. The combinations are also sometimes guilty of dumping. By dumping we mean the selling of a commodity in a foreign market at a price less than its price in the home market. It can be easily seen that the difference between the two prices must not be more than the cost of transportation otherwise the commodity might be reshipped and sold in the home market. The loss which the manufacturers undergo in a foreign market is made up, to some extent, by the higher prices charged in the home market.

"The possibility of dumping on a foreign market will raise the home price if marginal costs are rising, lower it if they are falling, and leave it unaltered if they are constant." (*Benham*)

There are four broad aims of the manufacturers in dumping goods in foreign markets :—

(a) To capture or retain a foreign market by killing a new rising industry in a foreign land.

(b) To dispose of a temporary surplus of a commodity.

(c) To expand the home industry and reap the benefits of the Law of Increasing Returns.

(d) To develop new trade connections.

Dumping is usually a temporary phenomenon and by its very nature is not likely to confer a permanent benefit on a foreign market. Instead, a positive and permanent injury is the usual consequence. All States, therefore, adopt protective measures against dumping.

12. Factors Which Facilitate the Formation of Combinations.

There are several factors which conspire to bring into existence large combines. Anything which facilitates co-operation or compels a concerted action in self-interest will lead to the formation of a combination. The following are some such factors :—

(a) Natural scarcity or control over certain essential raw materials gives rise to a combination.

(b) Imposition of tariffs necessarily limits or weakens foreign competition. Protection is said to be the mother of trusts. Free from foreign competition, the home manufacturers combine to eliminate competition at home so as to maximise their profits.

(c) When the number of manufacturers is very small and the industry is concentrated in a particular locality, combination is easy. The number of manufacturers in the field will be small if either the State imposes restrictions on new entrants or the capital outlay required is very large.

(d) *Standardised Product.* If the output is of one uniform quality, then there is nothing to distinguish one manufacturer from the other. It will facilitate a combination.

(e) The traditions in the country favouring joint action also lead to the formation of a combination.

13. Circumstances Unfavourable to a Combination. There are certain circumstances, however, which are averse to the formation of a combination. If there are no special difficulties in the way of new entrants, then a combination or monopoly will be very unlikely. If the producers are scattered and each contributes only a small output to the market, a combination will be difficult. If the quality of the commodity is the most important consideration and personal attention is necessary, chances of a big combination producing such a commodity will be remote. Also, when certain producers are in a strong monopolistic position already there will be little inducement for them to join a combination.

14. Forces That Threaten a Combination. It is not always easy to maintain a combination once formed. It is constantly feeling the impact of two sets of forces which threaten and disintegrate it. These forces are operating both from within and from without.

Within the combination, there are certain firms who begin feeling restive and find that the agreement is putting too great a strain on their loyalty. They do not find the combination working to their advantage. Probably some of the constituent firms have made technical improvements and find that they can look after themselves and will capture the market if they are not restrained by the agreement. They may have to work below capacity and they feel that the unused capacity involves them into a dead loss. Probably the assignment of quotas is considered to be unjust. Combination is a device sometimes to meet bad times and when the times change the combination appears to be no longer necessary. The efficient firms feel they are making a sacrifice to keep the less efficient ones alive. Thus the changing conditions of trade and industry make it very difficult, and sometimes impossible, to retain the loyalty of all the firms in the combination. Desertions constantly take place.

But these are not the only disintegrating forces. There are also forces invading from without. The pressure of the outsiders

or the new firms sometimes becomes too heavy and the combination breaks under the strain. The combination is able to prop up the price by curtailing the output which means that the firms have to work below capacity. But the new firms are constantly entering the field. They are under no necessity to resort to short-time working. They take advantage of the higher prices maintained by the combination but work themselves to full capacity. To prevent this increased production depressing the market the combination must further restrict output. Thus the outsiders or the new firms gain at the cost of the combination. When this pressure from outside becomes too much the combination has to be dissolved and freedom of action restored to all firms. The members of the Indian Jute Mills Association experienced this difficulty in the early 'thirties when they were under short-time agreement and had sealed a percentage of their loomage. Many new firms were started and the agreement became unbearable. The Jute Mills Association granted liberty of action to their members and put an end to the agreement.

Threatened by forces from within and from without a combination cannot last long.

15. Economic Effects or Evils of Monopolies. The existence of monopolies affects consumers, the quality and the quantity of the goods as well as the use and the remuneration of the factors of production.

(i) The remuneration of the factors of production is diminished because the demand for their services under monopoly is less than it would be in the case of competing firms.

(ii) In a combination, a quota is usually assigned to each firm so that it has to work below capacity. Some productive resources, therefore, remain idle in a monopoly.

(iii) As the quotas come up for revision periodically each firm is anxious to secure an increased quota at the next revision. For that purpose additional equipment is silently installed during the currency of the agreement. The cumulative effect is that surplus capacity is created in the industry.

(iv) Another consequence of quota arrangement is that the production is also carried on in the less efficient units so that the more efficient units have to work below capacity merely to enable the weak units to exist. This is obviously detrimental to consumer's interests.

(v) Under a monopoly the factors of production are not distributed in keeping with the preferences of the consumers but according to the monopolist's own judgment. Monopoly, therefore, seriously limits the sovereignty of the consumer.

(vi) The monopolist stands in the way of new capital and enterprise and prevents its entry into the industry. The infusion of new blood might have proved of immense advantage for the community. The monopolist deprives the community of this advantage.

(vii) The monopolist also retards technical progress. He is anxious to maximise his profits and it is sometimes not worth his while to replace his old equipment by the new and modern equipment. He would rather continue with the existing equipment as long as possible. No fear of competition compels him to reduce his costs by making use of the new processes and new inventions; on the other hand, when there are a number of competing firms, the firms which make use of the latest devices will be ahead in the race. This stimulates the application of inventions to industry.

A firm having a monopoly will scrap old equipment in favour of the new only "if the cost of working the latter plus interest and amortisation upon its purchase price is less than the cost of working the existing equipment. It will install equipment of the new type side by side with the old only if the profits from the former exceed the reduction in profits upon the latter due to the increased output and consequent fall in price of its commodity."¹ In the absence of this condition such a firm will not utilise the new inventions and it will thus deprive the consumers of the benefits of the more efficient method of production. If there is no monopoly new inventions will be used by new producers, who will enter the field and who will not be deterred by the fact that a lower price to consumers will reduce the earnings of existing equipment belonging to their competitors.

(viii) Output under a monopoly is less than it would be under competitive conditions. Lest the market should be spoiled output is deliberately restricted or destroyed. Over two million tons of coffee were destroyed by the Coffee Institute of Brazil between 1931 and 1934.

Some productive resources are deliberately kept idle or plant and equipment worked below capacity if full working will reduce monopoly profits. The monopolist only employs those resources which are sufficient to maximise his monopoly revenue. The output that does this is less than that which would be produced under competition.

Not utilising new inventions and equipment and preventing free enterprise and capital from entering the monopolised industry, have also the consequence of restricting the output.

The restriction of output reduces the demand for the factors of production and deprives the community at large of satisfactions that could be available.

There is every reason that the price under the monopoly should be lower. The monopolist has greater access to economies, internal and external. He can make full use of the indivisible equipment and need not spend much on canvassing and publicity. He is always at an advantage in buying and selling. The size of

17. Recent Tendencies Towards Monopolies. There was a time when combinations in trade and industry were looked askance at and they were regarded as positively antagonistic to the interests of the community at large. Anti-Trust Laws were passed in America and States everywhere kept a vigilant eye on the combination movement. They were considered dangerous.

But this view has undergone a complete change. The combination movement is no longer regarded as inimical to public interest. Rather, they are now regarded as essential if industry is to be rationalised. After World War I when Germany was saddled with reparation payments, the German industry had to rationalise for the sake of its very existence. Internal competition was eliminated and the competing units were put together under one organisation, controlling production and distribution. Only thus could obsolete plants be scrapped, inefficient plants closed and production concentrated in the most modern and up-to-date plants. The marketing arrangements had also to be centralised to do away with unnecessary costs incurred in beating the rivals. The products had to be standardised. All this could not be achieved if the industry remained split up in scattered, isolated and independent units. The combination movement in Germany produced wonderful results. The movement, therefore, spread to America, Japan and other countries.

Everywhere the State took active interest in bringing about combinations. The State exerted the necessary pressure and even afforded the necessary financial assistance. Even in England steps were taken to rationalise the Lancashire Cotton Mill Industry. The last world-wide economic depression gave special fillip to the combination movement as rationalisation was considered essential to re-organise the industry and to place it on a sound footing.

In our own country we found that whereas jute mill industry, coal industry, cotton mill industry, etc., suffered merely because their organisation precluded any concerted action on the part of the entire industry, the cement industry furnishes the solitary instance of rationalisation. It saved itself from internecine warfare and also benefited the country. Cartellisation seems to be one essential step towards placing our industries on a stable and sure foundation.

Monopoly is, therefore, very closely associated with industrial efficiency.

18. Public Control and Ownership of Monopolies. The monopolist generally reduces the output so that he may be able to charge a higher price and increase his profit. This is certainly an anti-social attitude. It is detrimental to the interests of the consuming public. The State as the custodian of public interests must intervene to curb the profit-hunting propensity of the monopolist and to safeguard the interests of the consumers.

The possible measures for the control of monopolies are :—

(i) Passing of Anti-Combination Laws. Anti-Trust laws, like the Sherman Anti-Trust Law of 1890 and Clayton Anti-Trust Law of 1914, were passed in America. Laws against Kartels were passed in Germany and Austria. But such laws were not always effective. When one form of combination was declared illegal, the lawyers' ingenuity suggested another and sometimes informal understandings took the place of formal agreements. The memorandum submitted by Board of Trade to the Committee of Trade and Industry in 1927 showed that the legislative control was only partially successful.

(ii) Suppression of Unfair Practices. Prof. Pigou suggests that the State should preserve potential competition and control the 'clubbing devices' which frighten away the potential competitor; these devices are destructive dumping, or cut-throat competition and boycott. But even he comes to the conclusion that "attempts to maintain potential competition by preventing the employment of clubbing devices can best be only partially successful."

(iii) Control of Prices and Profits. The State can regulate the monopolies by controlling profits and prices. No doubt there are practical difficulties and it is not so easy to hit on a price which is reasonable for the consumer and fair to the producer. The monopolist will try to throw dust in the eyes of both the public and the State and assume a pose of injured innocence. But it is worth while to attempt the task of regulating the monopolies. Purchasers' associations can also be organised.

(iv) Publicity. The Committee on Trusts suggested in 1918 publicity and public supervision as useful antidotes to the abuse of monopolistic authority. It is suggested that periodical investigations be conducted in the affairs of the monopolies and the searchlight of publicity focussed on their doings. It is expected this will keep them in proper trim.

(v) Nationalisation. Finally, the monopolised business may be nationalised. When the business is of a purely routine nature and the market is assured, then it can be safely owned by the State. In such an industry there is not much room for individual initiative and personal attention of the entrepreneur. The business can be conducted by a fool-proof administration. The public utility services can be, and should be, nationalised. The present Labour Government in Great Britain is expected to carry on the process of nationalisation of such industries.

19. Monopsony. 'Monopsony' is the term applied to buyers' monopolies. If the seller said, "Buy from us, or you don't buy," the buyer can retort, "sell to us or you don't sell." The big meat packers in South America found this out in World War I. "The buyer was the British Government, which had the power to control the refrigeration

space on ocean vessels."¹ Another similar case was the American automobile manufacturers who by working together were able to bring down the price of rubber—a Dutch monopoly. Another case of a buyers' monopoly is the purchasers of a particular kind of skilled labour which has no alternative market.

But buyers' monopolies are very rare and more difficult to maintain than sellers' monopolies. The buyers can maintain their monopoly power only by restricting their purchases of essential commodities. But in that case they inflict as much punishment on themselves as on the sellers (e.g., buyers of milk in a town, supposing they acted as one).

The buyers are scattered throughout the length and breadth of a country and sometimes the whole world. It is very difficult for them to organise themselves. It is very seldom that the consumers can form a combination. The consumers can buy from another shop if they are not satisfied with the behaviour of a certain shop-keeper. But if the product is a monopolised one, it is difficult to see what the consumers can do. They must pay the price or go without the commodity. Even if the consumers can combine and force the price down, it will be a short-lived triumph. The price may be unremunerative and capital may be driven out of the industry so that the supply of the commodity will decrease and price must rise again.

The buyers' monopolies are particularly ineffective if the demand for the good is inelastic. They cannot do without it. It may be a necessity of life or some essential raw material for the manufacturer. In such cases the seller is in a stronger position and can smash any purchasers' combination. Moreover, alternative markets cannot always be ignored.

The only effective way for the consumers is to club together and form a co-operative store of their own. But this is an admission of the fact that they were not able to dictate their terms to the producers or sellers.

The employers' associations furnish another instance of a buyers' monopoly. The employers are able to dictate terms to the workers sometimes. But a strong trade union can bring down the employers to their knees and their association cannot save them.

Thus we conclude that the buyers' monopolies are rare, weak and ineffective wherever they exist.

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the other hand, in the same way the marginal utility of X for B should be greater than that of Y to make him a willing partner to exchange.

Suppose these conditions do exist and exchange begins to take place. Let us ignore for the time being the rate of exchange, i.e., how many units of X are given for a given number of units of Y. As exchange proceeds A acquires more units of Y and B more units of X. For A the marginal utility of X increases (as its quantity with him decreases) and that of Y decreases (as its quantity in his possession increases). The opposite happens in the case of B. For him the marginal utility of Y increases and that of X decreases as exchange proceeds. If the exchange continues long enough a point will be reached either for one or both at the same time, when the marginal utilities of the two commodities will be equalised. Suppose this point is reached in the case of A first, so that his marginal utility of a unit of Y becomes equal to his marginal utility of a unit of X. If he continues exchange beyond this point his total utility will begin to fall since parting with an additional unit of X will mean a greater loss of utility than acquiring an additional unit of Y will mean a gain. He will stop exchanging, therefore, at a point where the marginal utility to him of the two objects is equalised, in other words when both the commodities have the same position in his "scale of preferences". As long as the two commodities occupy different positions in the scale of preferences of a person his total utility can be increased by his parting with the one occupying a lower position for one which occupies a higher position in this scale. *Exchange is possible between two individuals only when the two commodities occupy reverse position in their scale of preferences*, in other words, when one person attaches more importance to one commodity and the other person to the other, or in technical language, *when differences exist in their marginal utility ratios with respect to the two commodities*.

3. The Marginal Rate of Substitution. What we have called in the previous section the ratio of marginal utilities has been called the marginal rate of substitution in more recent terminology. This term has been introduced by J. R. Hicks¹ and R. G. D. Allen. It is claimed that by adopting it one can do without utility altogether. Since utility is a subjective concept which cannot be quantitatively defined the new term is regarded as superior. According to this terminology what has been previously called diminishing marginal utility becomes increasing marginal rate of substitution. We have already seen that exchange (substitution) is possible as long as the marginal utility of a commodity to an individual is higher than the marginal utility to him of another commodity. He tends to substitute a commodity with higher marginal utility for a commodity with lower marginal utility. In other words as exchange or substitution proceeds the person requires larger and

¹ See Economics: Feb 1934. See also Wicksteed's Commonsense of Political Economy, Vol. I, Chap. IX.

larger quantities of the commodity that he is acquiring to induce him to part with a given quantity of the good he possesses. Thus if a person is exchanging bananas for apples, as exchange proceeds, he will require large quantities of apples to part with a dozen of bananas. Thus as his marginal utility for apples falls his marginal rate of substitution of apples will increase. In our treatment, however, we shall stick to the usual concept of utility.

4. Ratio of Exchange Under Barter. Let us pursue barter further and see how ratios of exchange are determined under a barter economy. We have already seen that exchange becomes possible between two persons if each possesses the goods which the other desires and if the marginal utilities of the two commodities concerned are different for each. We also know that exchange continues until the marginal utilities are equalised. We now want to investigate as to the ratio in which the two commodities will tend to exchange.

It is obvious that even if both parties desire each other's goods, exchange will not take place unless the terms of exchange are attractive for both of them. Suppose a person A has apples and a person B has bananas. A may desire bananas but may not be willing to exchange them for apples unless he can get at least 2 dozens of bananas for a seer of apples. B, on the other hand, may desire apples but may be only willing to part with at the most $1\frac{1}{2}$ dozen of bananas in return for a seer of apples. No exchange is possible on these terms. Since to A the utility of one seer of apples is equal to two dozens of bananas; if he accepts $1\frac{1}{2}$ dozen of bananas he will be exchanging for a good of greater utility (one seer apples) one of smaller utility ($1\frac{1}{2}$ dozen bananas) to him.

Suppose, however, that A would be prepared, in order to get $1\frac{1}{2}$ dozen of bananas to part with a seer of apples. B, on other hand, would be willing to give as much as 2 dozens of bananas to acquire one seer of apples. Now exchange will be possible. What will be the ratio of exchange? The actual ratio in such a case will be indeterminate. We cannot definitely say at what rate these two goods will be exchanged. We can, however, define the limits between which the ratio will be. The limits will be

1 seer of apples = $1\frac{1}{2}$ dozen of bananas.

1 seer of apples = 2 dozens of bananas.

A will not accept less than $1\frac{1}{2}$ dozen of bananas and B will not give more than 2 dozen of bananas for a seer of apples. Between these two limits the actual rate will be determined by the relative skill in bargaining or relative intensities of reciprocal demands of the two parties. If A is more clever the rate will be nearer to 2 dozens of bananas per seer of apples, if B is more astute in bargaining the ratio will be nearer $1\frac{1}{2}$ dozen of bananas for a seer of apples.

The above was a case of isolated exchange, one individual against another. In the actual world such cases are analogous to bilateral

monopoly, i.e., when both the parties to exchange are monopolists. For instance, if employers and employees are both strongly organized the rate of wages will be determined according to the principles considered above. Within certain limits the actual wage will depend upon the relative bargaining strength of the parties.

In the actual world, however, all sorts of conditions¹ are found. There may be bilateral monopoly as considered above or bilateral competition, where there are more than one person on each side. Or monopoly on one side may be found with competition on the other and *vice versa* (unilateral competition). The problem of ratios or values becomes more complex under such conditions though fundamentally there is no difference in principles. We could study the determination of value under all these conditions under the assumption of a barter economy. But since in the actual world exchanges normally take place through the intervention of money, we shall pursue this subject in terms of prices. The examples of barter were given in order to get some insight into the working of the forces behind the monetary valuations.

5. Problems of Exchange. After having some idea of the nature of exchange let us now briefly review the various problems that we have to study in order to grasp this particular aspect of economic activity.

The central problem of exchange, according to some economists, is the problem of valuation. Since production is organised on the basis of division of labour and since this division of labour has attained greater and greater minuteness, goods are produced primarily to be sold in the market. Exchanges thus take place between buyers and sellers and ultimately between producers and consumers. Every one is a buyer and a seller in a barter economy. But when money serves as a medium of exchange the person offering goods (or services) is called the seller. There may be a monopoly on the buyer's side or on the seller's side or on both sides. Or there may be competition on both the sides. The buyers and sellers may belong to the same country or to different countries. In the latter case exchanges take place on an international scale. Thus valuation has to be studied under all these different conditions.

Then there are problems connected with money through the intervention of which exchanges take place. Money takes various forms and is variously organised. Then there are substitutes of money, the various credit instruments, issued by banks. Money again has an international aspect when payments have to be made to foreigners or payments have to be received from abroad.

1. For a concise treatment of equilibrium under barter under varying conditions, see Erich Roll : *Elements of Economic Theory*, pp. 67-87.

The main topics under which all these above problems will be studied are :—

1. Nature, extent and organisation of markets.
2. Determination of values under a variety of conditions.
3. Mechanism of exchange— money, credit and banks.
4. International aspect of exchange and value.
5. International aspect of money.

The next chapter is devoted to markets.

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1. Brij Narain—Principles of Economics. (S. Chand & Co.)
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CHAPTER XVI

MARKETS

1. **Markets.** In the ordinary language the term market is used to denote a specified place or area where buyers and sellers come together for purchase and sale of goods. In Economics the term is used in a wider sense. It does not refer to any place where goods may be bought and sold. It refers, on the other hand, to buyers and sellers of a commodity who are in direct competition with one another. In the words of the French Economist Cournot, "*Economists understand by the term market not any particular market-place in which things are bought and sold but the whole of any region in which buyers and sellers are in such free intercourse with one another that the prices of the same goods tend to equality easily and quickly.*" "Originally," says Jevons, "a market was a public place in a town where provisions and other objects were exposed for sale; but the word has been generalised so as to mean *any body of persons who are in intimate business relations and carry on extensive transactions in any commodity.* A great city may contain as many markets as there are important branches of trade, and these markets may or may not be localised. The central point of a market is the public exchange, mart or auction rooms, where the traders agree to meet and transact business. In London the Stock Market, the Corn Market, the Coal Market, the Sugar Market and many others are distinctly localised; in Manchester the Cotton Market, the Cotton Waste Market and others. But the *idea of locality is not necessary.* The traders may be spread over a whole town, or region of a country and yet make a market, if they are by means of fairs, meetings, published price-lists, the post office or otherwise in close communication with each other."¹

Thus the essentials of a market are : (a) Commodity which is dealt with ; (b) the existence of buyers and sellers ; (c) a place be it a certain region, a country or the entire world ; (d) such intercourse between buyers and sellers that only one price should prevail for the same commodity at the same time. "The more nearly perfect a market is" says Marshall, "the stronger is the tendency for the same price to be paid for the same thing at the same time in all parts of market."² allowing of course for the cost of transportation of goods from one place to another.

2. **What is a Commodity?** Generally when we speak of a commodity we mean a whole class of commodities. This is so because the same name may include several varieties. For instance cotton, wheat and tea, may not be three commodities but as many as all the varieties of them available for sale. From the point of view of the market each variety will be a separate commodity

1. Quoted by Marshall ; Economics of Industry, pp. 134-35.

2. Marshall, *op. cit.*, p. 135

since each will command a different price. "Two units", says Benham, "do not really belong to the same commodity unless they are perfect substitutes, that is unless every potential purchaser would be quite indifferent as to which of the two he received for his money."¹

The same product would be regarded as a different commodity if sold under a different trade mark. Thus "Lipton's Tea" may be exactly the same tea as 'Darjeeling' but since they are sold under different trade marks each will have a market and price of its own and will represent different commodities.

Similarly, exactly the same thing will be a different commodity at different places if its price does not tend to equalise easily and quickly. In the same way, the same product may represent different commodities at different times. Fluctuations of prices over time, however, are considerably reduced by the actions of speculators.

3. Classification of Markets. There are two bases on which markets may be classified : (i) *area* and (ii) *time*. According to area or space, the markets may be :

(a) *Local*. The buyers and sellers are drawn from a particular locality. The market activities extend over a small area.

(b) *National*. A commodity has a nation-wide importance. The buyers and sellers of that commodity are scattered throughout the length and breadth of the whole country. They maintain intimate commercial contact with one another.

(c) *World Markets*. There are certain commodities that have a world-wide demand, e.g., precious metals like gold and silver or staple commodities like wheat, rice and cotton. The buyers and sellers of such commodities are drawn from all the corners of the world and are in commercial intercourse with one another.

The classification according to time considers the time given to the forces of demand and supply to adjust themselves to a given change. On this basis the markets may be classified as—

(a) *Market on any particular day or at any given moment*. In this case there is no time to increase or decrease the supply, the price will largely depend on the intensity of demand.

(b) *Short-period market*. In this case supply is given some time to adjust itself to the change in demand ; but the time given is not enough, so that the influence of demand is still greater than that of supply or cost of production.

(c) *Long-period market*. In this case ample time is afforded for the changes on the supply side to work themselves out completely, consequent, on a change in demand. If demand has increased, additional supplies can be brought to the market ; and if demand has contracted permanently, then there is time for the factors of production to be withdrawn from that industry. In the long run

¹ L. Benham, op cit, p 24

cost of production exerts its full influence. The influence of the supply side is now greater. Price, in the long run, must cover marginal cost of production.

(d) *Secular market.* When forces of demand and supply are given a very long time, say a generation, to adjust themselves to changed conditions, it is called a secular market.

4. Evolution of Markets. The evolution of markets may be studied from two points of view : (a) Geographical and (b) Functional.

Geographically speaking four stages can be observed in the development of markets, (1) the family market where exchange took place within the bounds of a family only. (2) Local market : when buying and selling were confined to a town or a village or near about; (3) The national market : when the whole nation could be regarded as one market for certain commodities. (4) The world market : when market for certain goods embraced the whole world.

The last three divisions exist even today. Some goods have only a local market, e.g., fresh milk ; others only a national market, e.g., certain kinds of fruit ; and still others enjoy a world market, e.g., certain raw materials like cotton and silk and precious metals, etc. Geographical development has depended upon the development of transport and of scientific devices like refrigeration. They have enabled the commodities to travel longer distances. Portability of the commodity and the possibility of its grading also determine the area of the market. We shall presently see what factors determine whether a market would be narrow or wide in the geographical sense.

As regards *functional development*, markets have shown the following stages :

(1) *The general market* : where a great variety of articles are purchased and sold and buyers and sellers from immediate neighbourhood gather in certain localities to do business. Prices are fixed by bargaining based on a rough estimation of supply and demand. Such markets even now exist all over the world.

(2) *The specialised market* : with the greater development of industry and trade as well as transport the need for specialised markets arises. For instance separate markets arise for cotton yarn, cloth, etc. Labour market, money market, foreign exchange market, stock exchange, produce exchange, etc. are specialised markets.

(3) *Marketing by samples.* With the increase in the variety and volume of goods and extension of the area of demand it is not possible to display all the stock. Goods are standardised and buying and selling takes place on the basis of samples. This method is particularly useful for raw materials which are bulky but homogeneous when standardised.

(4) *Marketing by grades.* This is a further development from the sample system. This applies to raw materials that can be easily classified according to quality. The quality is exactly defined and named so that even seeing of the sample becomes unnecessary and the purchasers can order with confidence with reference to the grade of quality. This makes it possible to buy and sell things by telegrams over long distances. The area of the market thus can be enormously extended. No. 591-C and 8-A are well known varieties of wheat and 4 F and M.G.F G. are well known varieties of cotton.

5. *The Extent of the Markets.* The area or extent of the market will depend upon several factors :—

(a) *The character of the commodity itself.* A durable commodity which can be easily described, sampled or graded, will enjoy a wider market than one lacking in these qualities. The whole western world, says Marshall 'may, in a sense, be regarded as one market for many kinds of stock exchange securities, for the more valuable metals and to a less extent for wool and cotton and even wheat ; proper allowance being made for expenses of transport, in which may be included taxes levied by any customs houses through which the goods have to pass.' Things having small value and large bulk are not profitable to take to distant places and will have only local markets. Similarly, perishable goods (e.g., vegetables and fruit) unless they can be preserved profitably will have only local markets. Market for real estate (e.g., land and buildings) is local. Thus, in order to have a wide market a commodity must be (i) portable ; (ii) durable ; (iii) suitable for sampling, grading and exact description ; and (iv) such that its supply can be increased.

(b) *The nature of the demand for the commodity.* A commodity of universal demand (e.g., gold and silver) will have a wider market than one of a limited demand (opium in India).

(c) *Means of communication and transport.* Only a hundred years ago famine in India could exist side by side with plenty within a few miles of each other. Food grains could not be moved from places of plenty to places of scarcity due to the lack of transport facilities. Now food grains and other things can be imported from distant lands and also can be transported from India to distant places. Markets have consequently been widened.

(d) *Peace and Security.* Obviously goods cannot be marketed in distant places unless peace and order secures them safety. In war time due to insecurity in the war zones, markets get restricted.

(e) *Currency and credit system.* The factor of finance is also important. If the currency and credit system is well developed marketing can be conveniently and profitably carried on over extensive areas. In the absence of such facilities goods only move smaller distances

(f) *The policy of the State.* Markets may be restricted by the

policy of the State. Prohibitive duties may be imposed on imports or exports.

(g) *The degree of the division of labour.* We have seen in a previous chapter how division of labour is limited by the extent of the market. The converse of this is also true. The extent of the market also, in its turn, depends upon the degree of division of labour present in the productive process. If there is no division of labour in production there would be no need for exchange and there would be no markets. The greater the degree of division of labour the larger the area over which exchanges will take place in order to supply the needs of the people engaged in production. In other words, the greater the division of labour the larger the extent of co-operation necessary on the part of the people to satisfy their wants, and consequently the larger the area over which exchange will take place of given commodities, hence the greater the extent of the market.

6. The Role of Competition in a Market. We have to study the process of valuation under competition and under monopoly. In fact there is neither perfect competition nor perfect monopoly in the actual world. What actually exists is the various degrees of what is called 'imperfect competition' of which more later. It is necessary, however, to assume perfect competition in order to explain the various forces at work in a competitive market. These forces are very complex and can be studied only under artificially simplified conditions.

Perfect competition exists where two conditions are fulfilled :—

(a) Factors of production can move freely from one occupation to another in search of the highest reward.

(b) Neither any single buyer nor any single seller can by his individual action appreciably affect the price of the thing bought or sold. These are the implications of perfect competition.

The first condition implies the absence of all restrictions which might prevent movements of labour in search of better wages, capital seeking higher rates of interest, producers of raw materials seeking higher prices, etc. For instance, if a trade union limits the number of new persons entering a particular occupation by charging high entrance fees, and thus keeps their wages artificially high, the competition will not be regarded as perfect under such conditions.

The second condition implies : (1) a large number of buyers, (2) a large number of sellers, (3) buying and selling the same commodity or service, (4) each knowing the price at which others are buying and selling. The result of these conditions will be that one commodity will have only one price in the same market. But the second and more important result will be that no buyer or seller (producer or consumer) will be able to affect the price by his own individual action. The reason for this is quite plain. Since there are a large number of buyers whether one buyer buys more or less

or keeps away makes no difference to the price. Similarly, since there are a larger number of sellers whether one seller sells more or less or keeps away does not affect the price. The quantities involved, in relation to the total quantity of the commodity bought or sold, respectively, are insignificant. This fact, as we shall see, has great importance in the determination of value under competition.

When we speak of competition we mean competition between buyers and buyers on the one hand, and between sellers and sellers on the other. Competition among buyers tends to raise prices and competition among sellers tends to lower prices. Their mutual action tends to establish the same price in the same market.

Competition is more perfect in a wholesale market than in a retail market. In the wholesale market buyers and sellers are better informed about the conditions of supply and demand. Things are bought and sold for profit and in large quantities. In retail markets where things are bought for direct consumption by consumers, competition is relatively imperfect. A man may buy the same thing at a higher price in Delhi in Connaught Place rather than go to Chandni Chowk or Sadar Bazar to save a few annas. People may buy from their favourite shops even though they may have to pay a little more. Consumers do not buy for business purposes and buy in small quantities, hence they do not trouble themselves about small differences of price. They do not keep themselves so well informed about prices as those who buy wholesale for profit do. Wholesale markets are, therefore, subject to greater competition and are more perfect than retail markets.

7. Perfect and Imperfect Market. "A market is said to be perfect when all the potential sellers and buyers are promptly aware of the prices at which transactions take place and all the offers made by other sellers and buyers, and when any buyer can purchase from any seller and conversely. Under such conditions the price of a commodity will tend to be the same (after allowing for costs of transport, including import duties) all over the market."¹ In this sense every variety of a commodity or the same commodity having a different label or 'trade mark' is regarded a separate commodity as will be presently explained.

"A market is imperfect when some buyers or sellers, or both, are not aware of the offers being made by others."²

In other words if the same price rules for the same commodity at the same time in a market, it is said to be perfect. But, in case different prices are being charged or paid for the same commodity at the same time in a market, it is an imperfect market.

There is a *Law of the Markets*, also called the *Law of Indifference* by Jevons. This law states that in the same market, the price of a commodity at the same time must be the same. Then it is a matter

1. Benham—Economics 1940, p. 25.

2. Ibid, p. 26

of indifference for the buyers from whom they buy and for the sellers to whom they sell. The price is the same.

If this law of the market operates with full force so that the price tends to equality easily and quickly, then the market is perfect. In case, however, the operation of the law is hampered by custom or other types of economic friction, then same price will not rule for the same commodity. In that case the market will be called imperfect.

✓ *Conditions of a Perfect Market.* The Law of market, which brings about equality between the prices of the same commodity in the same market at the same time can operate only if certain conditions are fulfilled. These are the conditions of a perfect market.

✓ (i) *Free and Perfect Competition.* Unless unfettered competition is to be found both on the side of demand and supply, one price only will not prevail for a commodity at a given time. This means the absence of monopolistic control on either side. No seller or a group of sellers should be in a position to exert a perceptible influence on the price by controlling the supply of the commodity. A monopolist may charge different prices. Absence of monopoly and the prevalence of free competition is an important condition of a perfect market. This also implies full knowledge on the part of buyers and sellers about the market conditions and about the prices that are being charged or paid by others.

✓ (ii) *Cheap and Efficient means of Transport and Communication.* Same price for a commodity will rule only if the information about changes in prices are quickly transmitted to different sectors of the market and also if the commodity can be easily, quickly and cheaply transported to that sector where it fetches a higher price. If means of communication and transport are cheap and efficient then any divergence in the price appearing in any part of the market will be expeditiously removed. The commodity will be moved from that part of the market where its price is low to that part where it is high. The result will be that the price will tend to move up where it is low and fall where it is high. The movement of goods will continue till the prices are equalised. Hence availability of means of transport is another important condition of a perfect market, i.e., where the same price rules for the same commodity at the same time.

✓ (iii) *Wide Extent.* A perfect market is sometimes considered synonymous with a wide market. The extent of the market depends on (a) large demand and supply; (b) durability of the commodity; (c) its portability; and (d) suitability for sampling and grading.

The extent of the market is discussed below :

Example of a Perfect Market. Market for invested capital is the nearest approach to the perfect market. Invested capital takes the form of stocks and shares. The stock exchange market is a

very highly organised market. The dealers are experts and are in constant communication with one another so that a slight variation in price is at once noticed and extensively circulated. The shares of the same class are of exactly the same grade and are perfect substitutes for one another. They are most portable and can be sent from one place to another without much cost. "The method of quoting shares, of making bargains and of settling transactions are absolutely fixed and widely known, prices are rapidly circulated and easily understood, while the high moral standard which exists throughout the market is far more efficient than the strictest legal control in preventing fraud and minimising risks." (Thomas).

Markets for precious metals, first class bills of exchange, foreign currencies and important raw materials are also efficiently organised and may be regarded as perfect.

8. Market Transactions. Several kinds of transactions take place in markets. Things that are bought and sold may be divided into eight classes :—

(a) Consumer's goods ; (b) Producer's goods ; (c) Labour services ; (d) real estate ; (e) loans of money ; (f) paper titles ; (g) rights ; and (h) other currencies.

(a) *Consumer's goods.* Consumer's goods are wanted for direct satisfaction of human wants. In this group are included services of doctors, houses and cinemas purchased for direct consumption. The retail shops specialise in such goods. As we have seen, retail markets are less perfect than wholesale markets. Retail prices thus show appreciable differences in different localities and consumers can save money by taking some trouble to find the cheapest shops.

(b) *Producer's goods.* Producer's goods are not wanted for direct satisfaction of wants. Demand for these is " derived " from demand for consumer's goods for the production of which they are used. Examples of such goods are raw materials like rubber, wool, cotton, etc. ; intermediate products like steel bars and yarn, machines and tools, etc. The same good may be used as a consumer's good or a producer's good. Coal, for instance, may be burnt in the kitchen or in the boiler of a factory. This fact, however, does not make our classification useless. " Economic analysis is concerned," says Benham, " with functions of goods, with the part which they play in the economic system, rather than with their origin or their intrinsic qualities."¹

Producer's goods are, as a rule, purchased wholesale, hence the markets for them are more perfect due to reasons already given. Markets for them in many big cities are specialised. In London, for instance, you have Rubber Exchange, Corn Exchange, etc. Here buyers and sellers meet, commodities are exposed for inspection and transactions take place.

1. Benham : *Economics* (1945) p 30.

(c) *Labour services.* Apart from domestic servants, demand for most labour is "derived" from the demand for consumer's goods. In some countries minimum wages are fixed by authority; in many countries they are settled through negotiations between trade unions and employers' associations.

In some countries (e. g., England) Government sets up Employment Exchanges, to bring together employers wanting labour and labourers wanting jobs. There are also private employment agencies. Posts are also advertised in the Press.

On account of comparative immobility of labour, the weak bargaining power and the ignorance that prevails in labour circles, the labour market is generally imperfect.

The study of wages, however, belongs to the Department of Distribution since labour is not merely a commodity. But we can conceive of a labour market all the same.

(d) *Real Estate.* Lands and houses differ on account of situation in addition to other qualities. Thus they cannot be sold by samples. Such business is, thus, in the hands of specialised agents who bring buyers and sellers together in return for a commission. Advertisements are also used. The market for real estate is relatively perfect since buyers take lot of trouble before they purchase it.

(e) *Loans of Money.* In the money market, money is loaned and borrowed. The lenders may be private individuals or banks or issuing houses, the last being middlemen who advise the borrower what terms to offer in return for a commission. The borrowers may be public authorities, private firms or individuals. The price paid for loans is interest and shall be considered under Distribution in a subsequent chapter. The rate of interest varies according to the risk of default and the period of the loan. Money market in India may be regarded as imperfect.

(f) *Paper Titles.* Paper titles are of two types, those yielding fixed incomes and those giving fluctuating returns. Examples of the former are bills of exchange, treasury bills, loans raised by government, debentures.¹ Example of the latter are ordinary stocks and shares of companies. They yield "dividends" which fluctuate with the profits of the companies. Some paper titles have an in between character, e.g., participating preference shares. The holders of these receive a fixed return as well as something extra when profits are high. Such transactions take place in the Stock Exchange. As experts deal in such thing, the market is perfect.

(g) *Rights.* Rights may also be bought and sold, e. g., "Good-will" of a business, use of a "patent" of another firm may have to be paid for. "Options" are rights to buy something at a given price before a specified date. "Futures" means buying and selling rights to commodities at future dates. The dealers are experts and hence the market is perfect.

1. Securities bearing fixed interests.

✓ (h) *Other Currencies.* Currencies of foreign countries are purchased for making payments abroad and are sold for receiving payments from abroad. Their market is called Foreign Exchange Market. This market is perfect. We shall study details of it under Foreign Exchange.

To start with we shall be mainly concerned with markets for commodities. The working of other markets will be considered in their proper place.

9 Stock Exchange Organisation. Our stock exchanges are mostly organised on the basis of London Stock Exchange. There are two classes of members ; (i) jobbers and (ii) brokers.

The jobbers do business on their own account but cannot deal directly with the public. They must act through the brokers. The brokers, on the other hand, have to be brokers only. They cannot buy and sell on their own account. They act as intermediaries between the public and the jobbers. This specialisation is intended to minimise fraud and to place an honest and efficient organisation at the disposal of the investor.

The procedure for buying or selling shares is something like this. The would-be purchaser or seller of stock has to book the order with a firm of brokers who will then contact a broker. Suppose Mr. A wants to buy certain shares. He instructs a stock broker to buy these shares for him. The stock broker goes into the stock exchange and contacts a jobber who is asked to quote.

According to the rules of exchange the jobber must be ever ready both to buy and to sell. He must be prepared to buy shares which he does not want and sell the shares he has not got. The broker does not tell the jobber whether he wants to buy or to sell. The jobber, therefore, has to quote two prices one price at which he will sell and the other at which he will buy. Suppose the quotation of a security of the face value of Rs. 100 given by the jobber is Rs. 120—125. This means the jobber will buy at Rs. 120 and sell at Rs. 125. The difference between the selling and buying prices is the jobber's profit. It is called *jobber's turn*.

If the quotation is acceptable the bargain is struck. With the exception of government securities for which there are cash transactions, transactions relating to other stocks and shares are cleared on certain days fixed for the purpose. These are called the settlement days which are four. On the first day, it is ascertained whether the parties are in a position to carry out their part of the bargain. Suppose the purchaser is unable to pay for the shares he has contracted to buy. His broker will, then, ask the jobber to postpone the settlement to the next settlement which generally comes after a fortnight. The jobber agrees to the postponement but the seller has to pay interest on the amount which he had to pay and which he now promises to pay at the next settlement time. This payment is called *contango*.

But if the buyer is ready with the purchase price, whereas the jobber has not been able to procure the shares he has agreed to sell. Then the jobber will ask for a postponement and he will have to pay for it, because the purchaser loses some dividend on account of the delay in the delivery of the shares and he must be compensated. The penalty that the seller has to pay for not being able to give the delivery is called *backwardation*.

These things will be settled on the first day. In case the parties are willing and able to carry out the contract, then the next two days called the 'Intermediate or Ticket days' are devoted to the completion of certain formalities. The particulars of the purchaser are passed on to the seller so that the share may be formally transferred to his name. The fourth and the final day is devoted to the payment of cash and the delivery of the shares.

10. Advantages of Stock Exchange. Several advantages flow from the stock exchange organisation :

(1) It provides market for the invested capital. The stocks and shares are satisfactorily graded and can be readily sold or realised. It is through stock exchange that a shareholder can realise cash for his shares at the time of need.

(2) High standard of business morality and the great confidence that the stock exchange organisation inspires among the investing public are instrumental in attracting new capital in trade and industry. In the absence of ready realisability of invested capital new capital will not be encouraged to flow into industrial and commercial enterprises.

(3) Easy and cheap transactions in stocks and shares rendered possible in the stock exchanges facilitate the transfer and re-arrangement of capital.

(4) 'True value' of securities is settled in the stock exchanges. The dealers are experts and are in a position to form a correct estimate of the true worth of a stock which depends on its yield. No doubt sometimes the speculators on the stock exchange artificially raise the price of a security and sometimes depress it unduly but these divergences are only temporary. Sooner or later the price will get settled at its 'true value'.

11 Produce Exchange. Just as there are stock exchanges for the purchase and sale of stocks and shares similarly there are produce exchanges in which speculation (satta) is carried on in commodities like wheat, gram, cotton, jute, etc. These produce exchanges are called by different names like Grain Merchants' Association, Company or Chambers. Only members can enter into transactions which the Association will recognise and countenance. The Association maintains a list of firms with which a member can enter into a transaction. Only men of property are eligible to become members.

The quantity for which a transaction is permitted is not to be less than a *kotla* (500 maunds) and a member has to maintain a margin of Rs. 100 per *kotla*. The margin is never to fall below Rs. 100. In case it does, the Association will either cancel a transaction or settle it before the margin becomes insufficient to cover the loss.

The transactions are of two types : (i) spot (*hazir mal*) i. e., when the transaction has to be completed forthwith ; (ii) Forward transactions, i. e., when transaction is entered into at the present price but delivery is to be made at an agreed future date.

The transactions are according to Indian months, e.g., *Baisakh*, *Jeth*, *Har*, *Bhadon*, *Asuj*, *Maghar*, *Magh* etc. It is the seller's privilege, during the first 15 days, to ask the buyer to take the delivery and during the later 15 days the buyer can demand delivery. On the last day of the month either the buyer can demand delivery or the seller can give notice of delivery. For example if it is a *Jeth-Har* transaction, then on any day between 16th *Jeth* and end of *Jeth* the seller can ask the delivery to be taken and the buyer can demand delivery at any time between 1st of *Har* and 14th of *Har*. On the 15th of *Har* which is the last day of the month, for which the bargain was made, either the buyer or the seller may demand to make or take delivery.

If the buyer does not take the delivery when called upon to do so or the seller does not make the delivery, then the company completes the bargain, and loss, if any, is put to the account of the defaulter. When the buyer demands delivery he has to deposit 25% of the value of the goods with the company and the seller can receive the value from the company whom he has made the delivery.

In case either party is unable to complete the transaction he is allowed to continue it at a new price which is more favourable to the other party. But the old account must be settled and closed by the payment of difference to the party which has gained by the change in price, e.g., the buyer must pay the difference if the price has fallen.

12. **Speculation.** Transactions in the various markets take place not only for genuine buying and selling, but also for purposes of speculation. In speculation things are bought and sold by dealers to take advantage of expected differences in prices over a period of time. When a transaction is made at the present price but settlement is to be made at some future agreed date with the sole object of making a profit from the movement of prices, the transaction is called speculation.

If you buy wheat today and settle the bargain today by paying the values of the commodity today, it is not speculation. It is a cash transaction. If you undertake to make the payment at some future date, i. e., you buy on credit, this again is not speculation ; it is a credit transaction. Both these cash and credit transactions are spot transactions.

In case you enter into a transaction for the purchase of wheat after two months at whatever price may rule then, it is also not speculation, for a speculative transaction is at a price that rules today and not at one which may rule at some future moment.

Even if you buy at current price, delivery to be taken at the future, but you buy for domestic consumption, it is not speculation, because speculation is for profit and not for meeting domestic needs.

Hence the essentials of speculation are :—

- ✓(a) The transaction is made at the current price ;
- ✓(b) the settlement is to be made at some future date ; and
- ✓(c) it is done solely with a view to making profit. Hence delivery is neither given nor taken, only the difference is paid.

Such dealings may be in commodities like cotton, wheat, etc. These latter are carried on in what is called the Produce Exchange.

Speculative dealings may also be conducted in invested capital in the form of stocks and shares. People purchase stocks and shares in order to get income from their superfluous money. Those who merely purchase shares in order to sell them when prices rise are speculators. Their aim is speculation, not investment. The market in which such dealings are carried on is called the Stock Exchange.

Speculation is also known as dealing in futures or simply futures. A commodity must possess certain characteristics if it is to be suitable for speculative transactions, viz.,

- ✓(i) It should have a fluctuating demand but speedy adjustment of supply should not be possible, otherwise prospect of profit will be small.
- ✓(ii) It should be susceptible of accurate grading so that there is no misunderstanding as to the nature of the commodity and it is unnecessary to see it or its sample while making a transaction.
- ✓(iii) It should have a wide demand.
- ✓(iv) It should be possible to measure it accurately.

Kinds of Speculation. The essence of speculation is looking into the future. By intelligent anticipation of the future movements of prices, the speculator expects to make a profit. There is thus an element of speculation in every business enterprise. Every business man carries on his business in anticipation of demand. If his anticipation is right he will make a profit and if it turns out to be faulty, he will suffer for it and incur a loss. There is a risk in every commercial enterprise. But the speculator by the exercise of his expert judgment and by carefully estimating demand can minimise this risk.

Apart from the speculative element in every business enterprise there are two kinds of speculation.

(i) *Legitimate Speculation or Speculation Proper.* This type of speculation covers the activities of those speculators who are experts in their business. They proceed in the most scientific manner. Their function is to forecast demand and to estimate the future supplies. For this purpose they make use of all the statistical information available. In all countries crop forecasts are published. This will be his data of supply. He can forecast demand by considering political situation, possibility of war etc. He puts together all relevant facts and figures and estimates the course of future prices. It is on the basis of such scientific and careful calculations, that he enters into a transaction. This is speculation proper.

(ii) *Illegitimate or Improper Speculation.* This is sheer gambling. There is a large number of people who are ignorant of the forces operating on demand or supply side. They enter into a bargain blindly and without due deliberations. These unscrupulous operators deliberately manipulate the market. Their judgment is more often wrong than right. Their's is a leap in the dark. It is betting pure and simple. They run the risk of considerable loss and often ruin themselves. Many genuine investors too fall a victim to their unhealthy activities and undergo heavy losses.

The only difference between legitimate and illegitimate speculation is that the former refers to the activities of experts and the latter to the host of blind followers of these experts. The nature of the transactions is the same. If it is done by experts it is legitimate, otherwise illegitimate.

The legitimate speculation is useful to the community for it smooths out price movements but illegitimate speculation is extremely harmful for it accentuates price fluctuations.

13. **Certain Terms used in Speculation Markets.** *The Bulls.*¹ These are the ones who buy stocks and shares in the expectation that prices will go up.

*The Bears.*¹ Bears sell in the present because they suspect that prices are going to fall in the future. The market is bullish when prices are rising. It is *Tezi*. The market is bearish when low prices rule. It is *mandi* or dull trade.

Hedging. It is a device by which a producer or a manufacturer protects himself from the risk arising out of price fluctuations. He has to buy raw materials and stock them for months. If the price of the raw material falls subsequently he would think he has lost; his purchase was inopportune; he ought to have postponed it. But in case the price rises he has gained. But he is not enthusiastic about this gain, because that is not in his line. He is a manufacturer and not a dealer in that raw material. He is prepared to take risks in his manufacturing activity but not arising out of the

1. These terms originate from the fact that a bull throws its victim upwards and bear down to the ground at the time of attack.

fluctuations in the price of raw materials. This he is anxious to eliminate. How can he do it ?

Take the case of a miller. He buys 20,000 maunds of wheat for milling purposes at Rs. 10 per maund. Later the price falls to Rs. 8. He has lost Rs. 2 per maund, i.e., Rs. 40,000 in all. But if the price rises to Rs. 12 he shall have made a profit of Rs. 40,000. He wants to avoid this loss and will not mind if there is no profit either from the change in price. Hedging will come to his aid. When he buys 20,000 maunds at Rs. 10 in the spot market, he sells the same quantity at this price in the forward market. Now suppose the price falls to Rs. 8 per maund. What is the result ? On the wheat he has purchased 'spot' he loses Rs. 40,000 but on the forward market he gains Rs. 40,000 for he will be able to get it at Rs. 8 whereas he has sold it at Rs. 10. Thus the loss in one transaction is exactly set off by the gain in the other and on the whole he neither gains nor loses. This is exactly what he wanted. He does not want any profit or loss apart from his proper business of milling.

Such transactions as above are called the hedging contracts. By this means the business men can cover themselves against losses which are not in their line so that extraneous risks are eliminated.

✓ Options. Option is purchased to get out of a losing transaction. They are of three types :—

(i) Call Option. Suppose I have purchased wheat at Rs. 10 per maund but when the settlement day comes the price has fallen to Rs. 8. This means a loss of Rs. 2 per maund to me. I may have contracted to buy 5000 maunds. This would mean a loss of Rs. 10,000. But if I have purchased the call option, i.e., the right to buy or not to buy, by paying one anna per maund, thus I shall exercise my option not to buy and I lose only one anna per maund instead of Rs. 2 per maund.

(ii) Put Option, i.e., option to sell or refuse to sell. Suppose I have undertaken to sell 5000 maunds of wheat at Rs. 10 per maund. When the date arrives, the price in the market is Rs. 12. I lose Rs. 2 per maund, i.e., Rs. 10,000 in all. If I have purchased the 'put option' only I lose the option money which is insignificant as compared with the total loss on the bargain.

(iii) Double Option (Put and Call). This option will give me the right either to buy or to sell. If it is advantageous for me to sell, I may sell, or I may buy. I am free to choose. But having purchased this double option I am not sure I shall gain. It depends on what I have paid for the option and what is the extent of the change in price. If I have paid 4 as. per maund for the double option and the rise and fall in price is also 4 as. per maund, I neither gain nor lose. But if the rise or fall is more than this I shall gain by increasing my right to buy or to sell. In case, however, the rise or fall in the price is less than the price of the double option, I shall lose whichever way I may exercise my option.

Corner.—If a business man or a group of business men try to acquire the entire supply of a commodity in the market or a major part of it, it is called cornering or 'rigging'. The aim is to control the supply and then charge a monopoly price. When the means of communication or transport were imperfectly developed and the number of very rich people was small, cornering was flexible to some extent.

In modern times cornering is not so easy. To buy the entire supply of cotton, wheat or jute will require crores of rupees. Few can afford it. Even if an attempt is made it is likely to fail. The commodity can be brought from other parts of the world and the 'corner' would be broken.

14. Benefits and Dangers of Speculation. Speculation if carried on by people who understand the forces of supply and demand and act after getting the best information is not without its advantages. It helps in making prices steady by equalising the forces of supply and demand over a period of time. Take the case of cotton. Suppose a speculator in cotton in autumn, by studying all the factors acting on supply of and demand for cotton, comes to the conclusion that by next spring the price is bound to rise. He will proceed to purchase as much cotton as he can and other speculators will also do the same. This will create great demand for cotton in autumn when the new crop is coming and will raise its price. Suppose the price in autumn on account of the action of the speculators was raised from Rs. 10 a maund to Rs. 13 a maund. In spring suppose the price would have risen, if there had been no speculation to Rs. 18 a maund. But since the speculators have purchased large quantities of stock in autumn, they will sell it in spring and thus increase supply to meet the higher demand. Suppose the actual price, due to the action of speculators, settles at Rs. 15 a maund instead of Rs. 18 a maund. This means that on account of speculation the difference in the price of cotton between autumn and spring has been reduced from Rs. 8 (Rs. 18—Rs. 10) to Rs. 2 (Rs. 15—Rs. 13) only.

Thus if the expert speculators anticipate a rise in price in future, they will buy now so that they may make profit by selling in the future. The present purchases will raise the price immediately and the future sales will prevent a steep rise in the future. The result will be that the difference between the present price-level and the future price-level is narrowed down.

Similarly, if the expert speculators expect the prices to come down in future they will restrict their purchases now; they would rather sell now for future delivery. The curtailment of demand and present sales will bring the prices down immediately and when they buy in the future to give delivery, the anticipated fall in the price in the future is lessened. Here again the divergence between the present and future price levels is minimised. The steepness of the fall is mitigated.

In short, the activities of the expert speculators tend to eliminate violent fluctuations in prices. If prices were expected to

rise in the absence of speculation, they now rise less, and in case they were expected to fall they fall less. Speculation thus has steadying effect on prices. Speculators bring about a better adjustment between demand and supply.

Violent fluctuations of prices are socially harmful. They have a disturbing effect on economic life and they create an atmosphere of uncertainty which cuts at the very root of the industrial and commercial enterprise. The activities of the speculators result in eliminating their violent price fluctuations and render a great service to the community.

The steady prices are useful to (i) the consumer, (ii) the producer and (iii) the community in general.

(i) The consumer benefits, for when the prices are steady, he is better able to mop out his expenditure. Violent price movements upset his family budget and import an element of uncertainty in domestic economy. In that case his effort to minimise his satisfaction will be thwarted. If prices are steady his calculations are facilitated. The speculator is thus helping the consumer by making the prices steady.

(ii) The producer also gains from the activities of the speculators. It is a characteristic of modern industrial system that production has to be initiated long in advance of demand. Violent fluctuations in the price of the raw material will seriously upset all the calculations of the producer. There is a risk involved at every stage of production. The speculator intervenes at every stage to eliminate this risk. He makes the course of prices steadier and relieves the producer of severe headache on account of price changes. It is the speculator's job to forecast price movements and profit by them. By his expert judgment, he is able accurately to foresee the probable course of future prices. While trying to make profit out of the situation he succeeds incidentally in smoothing out price movements to the great advantage of the producer and the manufacturer. We have already seen in discussion on hedging how the manufacturer is enabled to eliminate extraneous risks.

(iii) Speculation is beneficial to the community in general because the speculators, by their activity, draw the attention of the community to the anticipated scarcity or abundance of a commodity. If it is going to be scarce we must start economising forthwith, and if it is going to be abundant, keeping large stocks will be unnecessary, uneconomical and risky. This service to the community is certainly of great value.

(iv) The speculators help in the economic distribution of a commodity. They are experts and know not only when the prices are going to rise or fall but also where they are high or low. The commodity tends to move to a place where prices are expected to be high. The result will be that the steep rise in prices in certain places is prevented and where they rule low, they are raised a bit. They bring about thus a more even distribution of the commodity. "The speculator does not add to existing supplies, nor does he sub-

tract from them, but these activities result in a better adjustment of supply to demand as between the present and the future" and we may add between one place and another.

If, however, speculation is carried on by ignorant people it is a mere gamble. They are likely to make serious mistakes of judgment and thus may purchase when they ought to sell, thus increasing rather than reducing price fluctuations. Such speculation is socially harmful and deserves condemnation.

It is well known how the feverish activities of the speculators in New York in 1929 brought about a crash in the Wall Street (New York Exchange). Prices of stocks were artificially raised to figures out of all proportion to the earnings, actual or prospective. The volume of monthly sales on the New York Stock Exchange increased from 18 million shares to 100 million shares.¹ The speculative boom had an inevitable crash. Hundreds and thousands of American speculators were ruined. Soon the rest of the world also found itself in the grip of a grave crisis. The Great Depression followed in its wake. In the words of Arthur Salter, "Speculation based on economic realities may be beneficial but 'speculation on speculation' is definitely injurious."²

'Speculation has been described as the salt of industrial and commercial activity. Accepting the gastronomic comparison as true, says an Indian writer, it may still happen that the same palate may reject equally food without salt as food which contains too much salt.' This speculation is good but too much speculation is bad. When speculation becomes an end in itself, it is dangerous; it is extremely harmful. "When this happens and the hope of gain is more and more isolated from productive activity and comes to rest exclusively on the game of probability of a rise or fall of prices, or the hope of profit arising from the differences between the purchase and the sale price.....there is a transference of activity from the field of work to that of play, from the factory to the Stock Exchange, from the field of production to that of distribution or re-distribution of wealth, and thus the easy enrichment of one at the expense of another comes to mean a transfer of wealth from the one to the other without any increase in the amount of wealth—which must, in the end, impoverish the country."³

In our example above, we talked of the forces of supply and demand determining price of cotton. Let us see how these forces actually operate.

Select References

1. Marshall—Principles of Economics (1936) p. 112, 323-332.
2. Benham—Economics (1940) pp. 20-42.
3. Brij Narain—Principles of Economics (1945) Ch. VI pp. 75-84. (S. Chand & CO.)
4. Thomas. S. E.—Elements of Economics (1939) Chapter 12, pp. 146-164.

¹ See Brij Narain—Principles of Economics 1945, p. 83.

² Quoted by Brij Narain in his Principles 1945, pp. 83-84.

CHAPTER XVII

SUPPLY AND THE LAW OF SUPPLY

1. Introduction. In the previous chapter we studied something about the nature and functions of markets. Value is determined by the interaction of two sets of forces, i.e., Supply and Demand. The equilibrium between these forces takes place in the market. We have already seen in the Department of Consumption how demand arises and how market demand can be expressed in the form of a demand schedule and a demand-curve. The demand schedule and the demand curve we have seen illustrate what is called the Law of Demand.

Corresponding to the Law of Demand there is a law working on the side of supply which is called the Law of Supply. Before we can understand how equilibrium of supply and demand takes place we must know something about supply and the Law of Supply.

For the purpose of studying market price we need not make any reference to the forces behind supply especially of reproducible commodities. Market price is the price that tends to prevail in a market on a particular day. The time is so short that production has little influence on the supply, rather the stock of the commodity under consideration. But we must explain these terms.

2. Supply and Stock. *Supply means the amount offered for sale at a given price, just as demand means the amount purchased at a given price. Supply should be carefully distinguished from Stock. Stock is the total volume of a commodity which can be brought into the market for sale at a short notice. For some commodities the stock and the supply may be practically the same. These are the commodities which must be sold within a short period whether the price is high or low. Perishable commodities like fish and melons are of this kind. Other commodities can be held back if prices are not favourable to the sellers, e. g., toys, cloth, etc. Here supply may only be a small portion of the stock available. If the price is high, larger quantities are offered by the sellers from their stock. If the price is low, only small quantities are brought out for sale.*

3. The Law of Supply. This brings us to the Law of Supply. Just as there is a Law of Demand, there is also a law that governs supply. It may be stated thus :—

'Other things remaining the same, as the price of a commodity rises its supply is extended, and as the price falls, its supply is contracted.' Note here that this is just opposite of what happens to demand. Thus when price rises, while supply is extended, demand is contracted, and when price falls supply is contracted and demand is extended. This is because higher prices are favourable to sellers and lower prices to buyers.

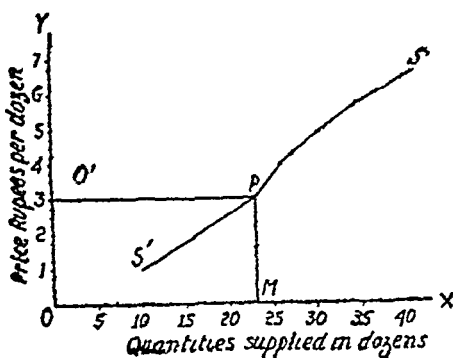
4. **The Supply Schedule.** Corresponding to the demand schedule already explained in the chapter on Demand, we can construct an individual's supply schedule and by totalling up the amount supplied at various prices by all the sellers in a market, we can obtain the supply schedule of the market.

Let us suppose the commodity is apples as before and that the following is the (market) supply schedule of apples.

Price per doz.	Quantity supplied
Rs.	in dozens.
7	40
6	33
5	29
4	26
3	23
2	16
1	10

It will be seen that when the price is as high as Rs.7 per dozen as many as 40 dozen apples are offered for sale. As the price falls, the amount supplied also falls. When the price is as low as Re. 1 a dozen, only 10 dozens of apples are offered for sale. This means that *as price falls supply is contracted, and as price rises, supply is extended.* This is the Law of Supply corresponding to the Law of Demand studied under Consumption.

5. **Supply Curve.** The supply schedule given above can be represented in the form of a curve, called the Supply Curve, which corresponds to the Demand Curve already noted.



Quantities supplied are measured along OX, and prices along OY. SS' is the supply curve. If from any point P on the supply curve, PM is drawn perpendicular to OX and PO' to OY, then at PM (=O'O) price, PO' (=OM) quantity will be supplied.

It should be noted that the supply curve slopes from right to left, as contrasted with the demand curve, which slopes from left to right. The reason is that when price falls demand is extended, supply is contracted and conversely when price rises, demand is contracted, supply is extended.

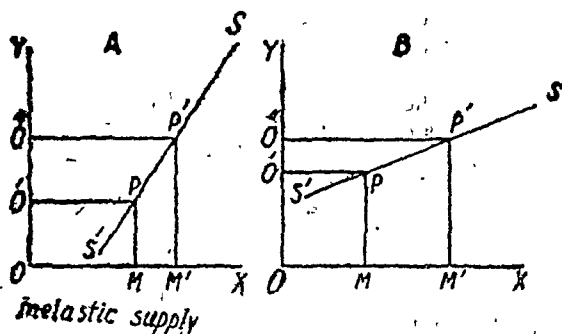
6. **Elasticity of Supply.** Just as there is the concept of the elasticity of demand there is also the idea of the elasticity of supply. When a small fall in price leads to a great contraction in supply, the supply is comparatively elastic; when a big fall in price leads to a

very small contraction in supply, the supply is said to be comparatively inelastic. Similarly as regards a rise in price the converse is true. A small rise in price leading to a big expansion in supply shows elastic supply and a big rise in price leading to a small extension in supply indicates inelastic supply.

The following curves illustrate the degrees of elasticity of supply:

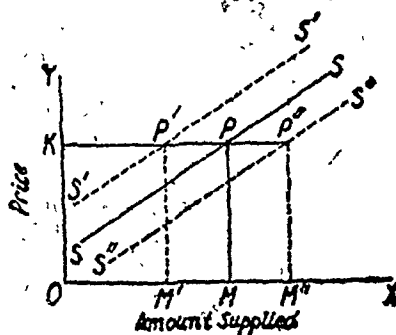
In the case A, supply is inelastic. Price falls from OO'' to OO' , supply extends from OM to OM' . A large fall in price ($O''O'$), leads to a small increase in supply (MM').

In the case B, supply is elastic. A small fall in price ($O''O'$) leads to a big extension of supply (MM').



7. Rise and Fall in Supply. As there can be a rise and fall in demand already noted, there can also be a rise and fall in supply.

Supply rises when at the same price more is offered for sale, and falls, when at the same price less is offered for sale. This is illustrated by the accompanying diagram :-



If SS is the supply curve before the change, $S'S'$ shows a fall in supply because at the same price OK ($=P'M'$) less is offered for sale (OM' instead of OM). $S''S''$ shows a rise in supply because at the same price

OK ($=P''M''$) more is offered for sale (OM'' instead of OM).

8. Causes of Changes in Supply. We have studied in chapter on Demand, the causes of changes in Demand. We shall study here the causes of changes in supply. The rise and fall in supply may take place on account of a number of factors.

In the first place, cost of production of a commodity may rise due to increase in the price of the various factors of production, like raw materials and intermediate products, used in its production. This will result in a fall in supply. Conversely, a fall in the prices of such factors will lead to greater production and consequent rise in supply. "During 1936 and 1937," says Benham, "the rise in the prices of timber, steel and other materials changed the conditions of supply of such goods as houses, ships and motor-cars."

Secondly, as regards agricultural commodities better rainfall, improvement in irrigation, more supply of manure and better

methods of production naturally would increase supply and failure of rains, floods, fires, dust-storms, earthquakes etc. will decrease supply. In India the supply of food grains depends to a large extent on seasonable rainfall. Increase in the area under agricultural products also would increase their supply. This happened in Russia, Australia, Canada and America during the inter-war period.

Thirdly, the cost of production of commodities may also be influenced through *improvement in technique*, better organisation of production and marketing. This will increase supply. On the other hand, higher taxation imposed on the output of the commodity or its factors of production will decrease supply.

Fourthly, *Improvement in the means of communication and transport* may increase supply of particular commodities if imports from foreign countries are encouraged and may reduce if exports are encouraged thereby.

Fifthly, *Political disturbances* like a war may disorganise or divert channels of trade and thus create scarcity of certain kinds of goods. The Bengal Famine of 1943 was mainly due to cutting of the supply of rice from Burma. Scarcity of cloth in India nowadays is the result of difficulties of importation and disorganisation of normal trade channels by controls, strikes, transport difficulties, etc.

Sixthly, supply may be consciously decreased by *agreement among producers*. Part of the supply may be destroyed in order to raise prices. During the great depression the production of rubber, tea and some other products was restricted through international agreements among the producers. Coffee was thrown into the sea in Brazil or burnt.

Finally, taxation on output, sales, imports, etc., also affect supply. By levying high import duties a government may restrict supply of a foreign commodity to encourage its production at home. Government may restrict production of certain articles for reasons of health (e.g., opium in India).

9. Factors Affecting Both Demand and Supply. We have studied factors which affect demand alone or supply alone. But there are factors which affect both demand and supply simultaneously.

(i) *Change in the amount of money.* When there is inflation, there is an increase in money incomes. Demand increases. But supply also is affected. Production will increase to take advantage of the rise in prices. Costs of production also increase when there is an increase in money incomes because incomes of the factors constitute costs to the entrepreneur. What a wage-earner receives is income from his point of view but cost from entrepreneur's point of view. When there is decrease in the amount of money or deflation, prices fall which stimulate demand but restrict supply.

(ii) *Improvement in technique.* When there is an improvement in technique, value of production increases and supply is increased. Things become cheap and consequently real income in-

CHAPTER XVIII

MARKET EQUILIBRIUM OF SUPPLY AND DEMAND

1. Equilibrium. Equilibrium means a state of balance. When forces acting in opposite directions are exactly equal, the object on which they are acting is said to be in a state of equilibrium. Tie a chord to a piece of stone and dangle it in the air. After oscillating from side to side the stone will come to rest if no further disturbance is caused. The stone is then in a state of equilibrium. This particular type of equilibrium is called stable equilibrium, for the object concerned after having been disturbed tends to resume its original position.

Balance a rather thick stick with the flat end on the ground in a vertical fashion. Disturb this balance and the stick will fall flat. It will not tend to regain the original position of its own accord. The stick was in a state of unstable equilibrium.

For stable equilibrium it is not necessary that the object should attain balance. If there is constant disturbance it may not come to rest, like the pendulum of a clock. But it always tends to come to its original position of rest. If undisturbed it would succeed in doing so ; it is thus in a state of equilibrium.

2. Equilibrium of Supply and Demand. The idea of equilibrium has been applied to supply and demand. These are two sets of forces tending in the opposite directions. Larger supply tends to lower price, greater demand tends to raise price. When the pressure of these two forces is equal in the opposite directions they tend to maintain a certain price which is called the equilibrium price.

The table given below combines the supply and demand schedules already noted and shows how equilibrium takes place between these two sets of forces. The commodity taken is apples :

Price per dozen	Quantity demanded	Quantity supplied.
7	4	40
6	7	33
5	12	29
4	15	26
3	23	23
2	29	16
1	38	10

It will be seen that when price is Rs. 3 per dozen 23 dozens are supplied and 23 dozens are demanded, the supply is equal to demand. Rs. 3, therefore, is the equilibrium price. Any disturbance of this

3. Market Price. *Market price is the price which tends to prevail in a market on any particular day.* It is the result of the temporary equilibrium between supply and demand for that particular day. Market price is influenced by changes in supply and demand on a particular day. These influences are temporary and short-lived. The next day, nay the next hour, demand and or supply may be different. Market price is thus the outcome of passing events and forces which are transient. Such forces or influences vary from day to day and from hour to hour. Hence market price fluctuates from day to day and from hour to hour. It represents very temporary equilibrium of demand and supply at the moment. Suppose there is a cattle fair. The supply of milk is considerably increased for those days. On account of this additional supply, price of milk will come down. There will be a new equilibrium at a lower level. The price will be low enough to carry the entire supply of milk. But this equilibrium will be temporary. When the cattle fair is over old equilibrium will tend to be restored. Now in the month of *sharadhs*, there is a very great demand for milk and price of milk will go up. There will be an equilibrium at the higher level. The price will be high enough to restrict less urgent demand so that existing supply is equated to demand. But when *sharadhs* are over, old price will tend to return. Market price thus represents a changing equilibrium.

The time is so short that supply can only come out of the stock that is already in the market, or that can be brought at a short notice, or is 'in sight'. When the period is very short (a day) stock is practically fixed. The question of its increase by further production, therefore, does not arise. The cost of production, therefore, has only an indirect influence on price. If the commodity cannot last for more than a day (fish for instance), i.e., is perishable, the cost of production has practically no influence on price. The whole amount has to be sold and it will be sold at a price which measures the marginal utility of the consumers (taken in the aggregate) for the amount.

4. When the Commodity is Perishable. An example will make this clear. Suppose a perishable commodity, like fish, is brought to a market on a particular day, to the amount of 100 seers. At what price this 100 seers of fish will sell? As the commodity is perishable the whole of it must be sold during the same day. We assume that the sellers of fish have no demand for fish themselves. There will be some fish consumers, who will be willing to pay perhaps a price of Rs. 5 per seer rather than go without fish. Their marginal utility for fish is very high, and is measured by Rs. 5. At this price, perhaps, five seers of fish will be sold. Similarly, there will be consumers who are willing to pay lower prices according to their marginal utilities. Let us make a demand schedule of

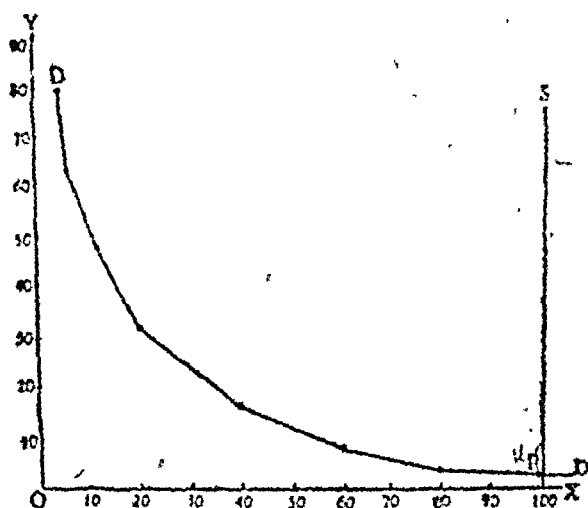
this market. It will be something like this :—

Prices per seer	Quantity demanded
Rs.	seers
5-0-0	5
4-0-0	7
3-0-0	12
2-0-0	20
1-0-0	40
0-8-0	60
0-4-0	80
0-3-0	100
0-1-0	150

The price ultimately settled will be annas 3 per seer, because at this price the whole of the fish can be sold. Those consumers whose marginal utility of fish is measured by annas 3 will be the marginal consumers, and they must be attracted if the whole fish has to be sold. But as in a perfect market there can be only one price for the same commodity, everybody will pay annas 3 for a seer of fish, even the rich man who was willing to pay Rs. 5 per seer. He will get a consumer's surplus of Rs. 4-13-0.

The accompanying diagram illustrates how the market price of fish will be determined.

Measure quantity along OX and price along OY. Since the supply is fixed the supply curve SM will be parallel to OY.



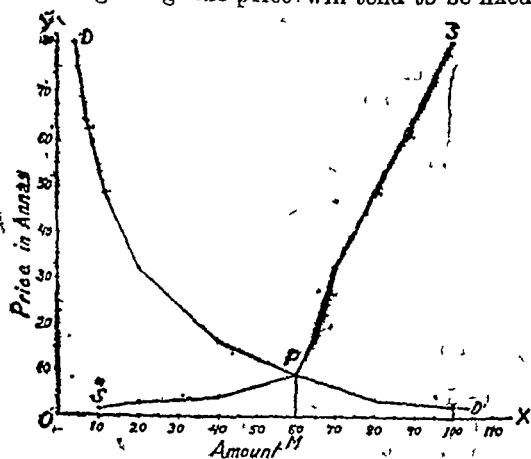
Let the point of intersection of the supply and the demand curves be called P. Then PM will be the market price at which 100 seers of fish will be sold. PM=as. 3.

5. When the Commodity is Non-Perishable. If the commodity is not perishable, it can be stored if the sellers expect better prices in the future. In that case, the amount offered for sale will not be fixed. It will vary with price. Suppose the commodity is toys. Taking the same figures for demand, we could have also a

supply schedule for toys. If the price is very high (say Rs. 5), perhaps the whole stock will be offered for sale, but as the price falls some sellers would rather wait for the next day, or would rather keep the toys for their own children. In that case, the marginal utility of the sellers for the toys will be the minimum below which they will not accept any offer. Thus :—

Price per toy annas	Amount demanded toys	Amount supplied toys
80	5	100
64	7	90
48	12	80
32	20	70
16	40	65
8	60	60
4	80	40
3	100	20
1	150	10

After haggling and bargaining the price will tend to be fixed at 8 as. per toy. This price is higher than the price at which fish was sold because the sellers of toys can wait. Owners of 40 toys have refused to sell at this price. They would rather wait for better times, or some of them would rather use the toys for their own children's benefit than accept a low price.



Annas 8 is a price which is the result of the equilibrium between supply and demand, on that particular day, in that particular market for toys. The curve given above shows how the equilibrium price is reached in the case of

As before price is measured along OY and amount (in units) along OX .

SS is the Supply Curve, DD being the Demand Curve as before. P is the point of their intersection. MP thus is the equilibrium price. $PM = \text{as. } 8$.

6. Price of Irreproducible Commodities. So far we have assumed that the commodity concerned whether perishable or durable can be reproduced. How is the market price of commodities that cannot be reproduced, determined? Such commodities may be pictures by old masters, unique diamonds, old manuscripts, etc. In principle there is very little difference in these cases and the cases considered above. The stock of such commodities is fixed. The seller, however, can wait. Ultimately the price will be determined by the marginal utility of consumers. The lowest limit of price will be determined by the marginal utility of the seller himself. The highest limit, if there is only one unit to be sold, will be determined by the highest offer among the purchasers. If there are a number of units of the same commodity and they are all on sale at the same time, price will be decided by the marginal utility of the consumers taken in the aggregate. Such a price will have no relation to the cost of production of the commodity. The question of cost of reproduction does not arise since the commodity cannot be reproduced. Marginal utility is supreme here, whether the period is short or long.

Such cases differ from the case of reproducible commodities in the fact that in the latter case the marginal cost of production ultimately sets limits to the increase of supply. Unless cost is met reproducible commodities cease to be produced. This, however, is the problem of normal price as against market price. We shall consider it in the chapter after the next one.

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CHAPTER XIX

THE CONCEPT OF COSTS OF PRODUCTION

1. **Normal Price.** In the last chapter we were concerned with market value. We studied the various forces that determine price in the market on any particular day. Market price may fluctuate violently due to sudden change either on the side of supply or demand. A big arrival of fish may depress its price in a particular market. A sudden heat wave may raise the price of ice. These prices are, however, temporary influences and cause temporary disturbances in the market value. In the absence of such disturbing causes the price tends to come back to a certain level. This level itself may not be a fixed point for all times. But if the methods and scale of production remain on the whole constant, this level may be taken as a fixed anchor around which, in its day-to-day movements, market price fluctuates. Adam Smith called this level as "natural" price and Marshall has called it "normal" price. In the words of Marshall, 'Normal' or 'Natural' value of a commodity is that which economic forces would tend to bring about in the long run. It is the average value which economic forces would bring about if the general conditions of life were stationary for a run of time long enough to enable them all to work out their full effect." In this chapter we shall be concerned with the study of influences which determine this level.

It should be obvious that the question of normal price arises only in the case of reproducible commodities. Commodities the stock of which cannot be increased have no long-period price problem. They sell according to the marginal utility of the consumers for the quantities offered for sale. In the case of reproducible commodities if the demand price is attractive enough it pays producers to undertake further production, whether they will or will not depend upon the cost of production in relation to the prevailing or expected price.

2. **Distinction Between Market Price and Normal Price.** Market price and normal price differ in the following respects :—

(1) Market price is the price which *actually prevails* at a particular moment as the result of the temporary equilibrium of forces of demand and supply at the moment.

Normal price, on the other hand, is never *actually* the price ; it is one which is only *likely* to be the price in the long run and when that time comes, the actual price will be called the market price and some other price will be expected to prevail in the long run ; the price becomes the normal price.

(2) Market price is the result of temporary causes and passing events, whereas normal price is influenced by permanent and per-

sistent causes, for in the long run temporary causes disappear or neutralise one another.

(3) Market price fluctuates from day to day, even from hour to hour. But normal price, under given conditions, remains a sort of fixed standard. It does not change daily or hourly. It is the centre round which the market price oscillates or the level to which it tends to return after having departed from it temporarily.

(4) All commodities can have a market price, i. e., the price at which things are actually bought or sold but only reproducible commodities can have normal price, i. e., what price is expected to prevail in the long run. If the things cannot be produced at all, there is no sense in speaking of their normal price which is influenced by the cost of production, for these things have no cost of production. They simply cannot be produced.

Normal price depends upon cost of production to the study of which we now turn.

3. What is Cost of Production. There is considerable confusion about the definition of this term. One distinction is between (i) *Nominal or money cost* or expenses of production as incurred by the entrepreneur for the production of a commodity; and (ii) *the real cost of production*. This latter has been variously interpreted. Adam Smith regarded pains and sacrifices of labour as real cost. Marshall includes under it "real cost of efforts of various qualities" and "real cost of waiting."¹ This is called the social cost by Marshall. (iii) *The Austrian School of Economists* and their followers have given a new concept of real costs. According to them the real cost of production of a given commodity is the *next best alternative sacrificed in order to obtain that commodity*. We shall consider this concept in greater details in a subsequent chapter.

For the moment we shall use the word cost of production in the sense of *money cost or expenses of production*. This is the point of view of the entrepreneur. Whatever is the nature of the real cost the employer thinks in terms of money costs. He continues to produce only as long as he can recover his expenses of production, including normal profits, necessary to keep him in business as an entrepreneur. To start with, therefore, we shall analyse the entrepreneur's cost of production and then see in what manner such costs influence prices. Later on we shall go after these monetary expenses to more fundamental forces determining value.

The entrepreneur's cost of production includes the following elements²: (i) *Wages of labour*; (ii) *interest on capital*; (iii) *rent or royalties paid to owners of land or other property used*; (iv) *cost of raw materials*; (v) *replacement and repairing charges of machinery*; and (vi) *profits of the manufacturer sufficient to induce him to carry on the production of the commodity under consideration*.

1. Marshall—*Principles of Economics* (8th Ed.) p. 350.

2. For details see Meade: *Economic Analysis and Policy* pp. 2-5.

4. Prime and Supplementary Cost. The cost of production of the entrepreneur may be analysed from another point of view. *Some costs vary more or less proportionately with the output while others are fixed and do not vary with the output in the same way. The former are known as prime costs and the latter as supplementary costs of production.* Take the case of a sugar factory. Some of its costs are constant whether the output of sugar is say 15,000 maunds or 1,500 maunds a year. The rent of the factory building, interest on capital invested in machinery and salaries of the permanently employed staff must be paid, whether the output to be produced is large or small, even if the factory is not working for a time. Such costs are called the supplementary costs of production. Costs of casual or daily labour employed are only incurred when the factory is at work and roughly only in proportion to output. Such are the prime costs of production. The distinction between Prime (Variable) and Supplementary (Constant) costs applies only to a short period. Nothing can remain fixed for a long time. In the long run, the staff would change; amount of capital invested would be different, the dimensions of the factory too will change and so on. Hence "in the very long run, all costs are variable or prime."¹

In the long run both the prime and the supplementary costs of production have to be met out of the sale proceeds of the commodity produced, sugar in our example. But in some cases the actual price charged may be such as to meet only the prime costs and a very small portion of the supplementary costs of production. In such cases the price is below the total cost of production. Such occasions are given below.

5. When Price May be Lower Than the Costs of Production.

(1) *During a trade depression price may fall so low that a producer is unable to meet his cost of production. He has two alternatives in such a case. Either he should stop production altogether and wait for the time when condition of the market is more favourable. But he might lose altogether his hold on the market if he adopts this course. The second alternative is to go on producing his commodity so long as he can meet the prime costs and a small portion of his supplementary costs, however small. If he stops production he will have to incur his supplementary costs in any case. It will be to his advantage, therefore (unless he wants to retire from business altogether), to adopt the second alternative. This course, however, can be followed only on the assumption that depression will not last too long.*

(2) *In the case of fixed and specialised capital being used in a business it may pay the producer to continue with his old capital, even if he does not recover his total costs of production. This is so because if he sells out his old fixed capital and installs more up-to-*

1. Bonham—Economics, 1940, p. 181.

date machinery his loss on the old capital may not be covered by increased profits from the new capital.

(3) *Dumping*. It may pay a producer to produce on a very large scale in order to reduce his costs of production, sell a part of it in the home market at usual prices, while selling the surplus in foreign markets below the cost of production. This is called dumping. What the producer loses abroad, he gains by charging higher prices at home. But since cost of production for the higher amount is very much less he is able to earn profits at home even at moderate prices.

(4) *Foreign Competition*. A producer may charge prices below his cost of production in order to kill foreign competition. After such competition has disappeared he raises his price again and thus covers earlier losses.

These are, however, all temporary contingencies. Ultimately the price must be high enough to cover the cost of production of the commodity concerned including both the prime and the supplementary costs.

There are all sorts of producing units supplying the same market, whose cost of production must be covered. Presumably they are not all producing at the same cost of production. Further, even the same producing unit or firm does not produce all the units of production at the same cost. *Cost of production of which unit should be covered by the price?* Price in the long run must cover the marginal cost of production. Let us now consider this.

6. Marginal Cost of Production. The term marginal cost often causes confusion in the minds of students of Economics and requires a careful understanding. Marginal cost of production may mean :

(i) Cost of production per unit of the *marginal firm* ; or

(ii) Cost of production per unit of the *marginal output*.

• Let us explain these two meanings.

(i) *Marginal firm* is the least efficient of all existing firms, its expenses of production are the highest per unit, and it is just able to keep its head above water. If the price in the market were to fall but slightly, it will go under, because at the prevailing price it is just remunerated for its expenses of production, earning no extraordinary profit but just the normal average profit. If there are three cycle manufacturers A, B, C, serving the market and have their cost of production per cycle respectively, as Rs. 125, Rs. 140 and Rs. 150, then C, with its highest cost Rs. 150, is the Marginal Firm.

Marginal cost of production, in one sense, means the cost of production per unit of the marginal firm like the one described above.

But the marginal firm may not always be one working under the least advantageous conditions. The essential point about the

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margin is the relation between the price and the output. When the price falls output will have to be decreased. Some firm may think it worth while to divert its labour and capital to some other industries. This will be marginal firm but is it sure that it will be the least efficient one? Rather it may be the one managed by superior entrepreneur who, looking more clearly than others at the signs of the time, may decide to quit. The firm which is on the margin of doubt whether to continue or quit is the marginal firm.

The traditional view of the marginal firm presupposes the existence of firms of varying efficiency. But the margin will be still there even if all firms were of the same efficiency. In case of contraction of supply, the output lost will be the marginal output. It may not be of any particular firm but distributed by agreement among all firms.

(ii) *Marginal output.* As a business expands and increases its output the Law of Diminishing Returns may operate and costs may rise. But the entrepreneur will go on increasing, successively, his output till the extra income that he gets is equal to the extra expense that he incurs. The last addition to the output is called the marginal output. *The cost of production per unit of the marginal output is the second sense in which the term marginal cost of production is used.* If a farmer is intensively cultivating his land he may raise the first 100 mds. of wheat at Rs. 3 per md., 2nd unit of 100 mds. at Rs. 5 and the third at Rs. 7 per md. which is the cost per unit of the marginal output (i.e., the last 100 mds. of wheat raised). This is the marginal cost of production. Marginal cost of production has also been defined as the addition to the variable cost associated with a small increase in output.¹

It will be clear that the fixed or supplementary costs do not form part of the marginal cost in the short period. They have to be paid out whatever the output. They do not vary with the output. A producer will go on producing more till the price is greater than the additional (i.e., marginal) cost of producing another unit. But longer the period the greater will be the number of cost items out of the supplementary list which must form part of the marginal cost.

7. Importance of the Margin. The concept of the margin, however, has a very great importance in economic theory. Its importance lies in that 'it is only at the margin that any of those shiftings can occur by which the changed relations of demand and supply manifest themselves. It is at the margin that business failures and bankruptcies occur and financial ruins are registered, and it is at the margin again that new firms and enterprises take their rise. Substitution also takes place at the margin..... Decisions as to the distribution of means between gratification of different wants in primitive society, the distribution of income among alternative objects of consumption in a money economy and also the distribution of money as between present and future uses are all taken at the margin.' In the words of Wicksteed, "everywhere hath she (margin) sway; there is her

1. Benham—Economics, 1943, p. 224.

imperial throne. It is there that the direction of human efforts is put to economic tests and thence that signals are flashed back all along the line, stimulating and checking the distribution of resources at every point of division." The concept of the margin is of special importance in relation to output. *It is the determining factor in fixing the size of the output.* In deciding how much to produce the producer does not consider the average cost of production but the marginal cost of production. It is more important for him to consider how much more he will have to spend if he increases the output and he will compare this additional expense with the anticipated additional income from that extra output. The rule which will guide him is the equating of the marginal costs with marginal revenue or the price. Every firm producing under competition, will have the same marginal cost because price is the same for all. The inefficient firms will stop producing earlier, for their marginal cost will soon overtake price whereas the efficient ones will have a larger output and then their marginal cost will come up to the price. Temporarily, however, in the circumstances mentioned above, a firm may produce even if the price is less than the marginal cost. The entrepreneur is prepared to suffer a loss in the hope of better days when price will rise and he may be able to make good the loss.

8. The Optimum Firm. *The optimum firm is a firm which has the most efficient combination of the various factors of production.* From the point of view of the entrepreneur it produces at the minimum average cost per unit. Its size is such that a little enlargement or a little curtailment would tend to lower its efficiency or, in other words, increase the cost per unit. Under perfect competition every firm tries to attain the optimum size because such a size yields maximum profits to the entrepreneur.

It should be remembered that the *optimum is not a fixed point.* Like the optimum size of the population it is a relative not an absolute concept. It may be different with different sets of resources, changing with every modification in one or more of such factors. Improvements in technique, in the art of marketing, better facilities for acquisition of capital may increase the size of the optimum unit. Any difficulties in commanding one or more types of resources, on the other hand, may make the optimum move in the reverse direction.

We have seen above that under competition every producer tends to expand his output up to the point at which his marginal cost equals the price. The volume of output thus produced is called the *optimum output*, because it yields maximum profits to the producer. Under conditions of perfect competition, therefore, every firm tries to achieve the optimum size by producing the optimum output. But this does not mean that it actually achieves this size. The degree of its approach to the optimum size will depend upon the nature of its business. An optimum size with respect to one set of resources may not be the optimum with respect to others. For instance, from the point of view of direction a bigger size may be the most efficient, but from the point of view of the technique

of production a smaller size may yield best results. To meet this difficulty sometimes several complete units of production are put under one direction. In the opposite case several independently directed units may contribute to the production of a single commodity. For instance in the engineering industries the optimum from the point of view of technology is larger than from that of direction. Some intermediate processes are in such cases handed over to independent firms of small size. But the same business may subdivide and schedule its process at different places according to the conveniences of raw material and transport. For instance, Morris Motors are assembled from parts made by branches of the firm located at several places.

9. Optimum Firm Versus Marshall's Representative Firm. It has been claimed that the concept of the optimum firm is superior to that of Marshall's Representative firm for explanation of value. In the words of Marshall the Representative Firm is a firm which "must be one which has had a fairly long life, and fair success, which is managed by a person with normal ability, and which has normal access to the economies, external and internal, which belong to that aggregate volume of production, account being taken of the class of goods produced, the conditions of marketing them and the economic environment."¹ Thus such a firm is neither too well-managed nor too badly managed; is neither very new nor very old; and enjoys moderate economies of large scale production. In a word it represents its class as a typical firm. It is the marginal cost of production of such a firm to which, according to Marshall, price approximates in the long run. Firms that cannot sell at such a price sooner or later have to close down. Those which can just manage to sell at this price are marginal firms for such an industry. According to this view, therefore, normal price tends to equal the marginal cost of production of the average or Representative Firm.

More recent economic analysis rejects Marshall's concept. It is argued that the conception of the "representative firm" like that of Ricardo's "economic man" is too abstract and static to have much practical utility. Industrial conditions being essentially dynamic, it is held, it would be impossible in practice to locate the representative firm in any industry. Lionel Robbins thinks that the concept of the Representative Firm is unnecessary. He says: "There is no more need for us to assure a representative firm, or a representative producer, than there is for us to assume a representative piece of land, a representative machine, or a representative worker."²

*"The optimum firm, on the other hand, is a concrete possibility: It is the unit of size which conscious direction and the forces of competition compel all firms to attempt to approach, who wish to survive in the struggle for existence."*³

10. For the Optimum Firm Average Cost Equals Marginal Cost. When a firm reaches the optimum size its marginal cost and its average cost become equalised. This is a mathematical truism and can be illustrated by a simple example. Suppose a postman on his round of duty has a walking average of 15 miles a

1. Marshall - Principles of Economics, 8th Ed. p 317. 2 J. Robbins—"The Representative Firm" Economic Journal, Sept. 1928, p 393.

3 Briggs and Jordan—Text Book of Economics, p 221.

day. If by going round an additional day his average is reduced it means he has done less than 15 miles that day, if it is increased he has done more than 15 miles and if he maintains the same average he has done exactly 15 miles on the additional day. In the same way let us suppose the average cost per unit of a producer is 15. If by producing another unit his average cost is reduced the additional unit or the marginal units must have cost him more than Rs. 15. If the production of the additional unit raises his average cost, the marginal unit must have cost him less than Rs. 15. And finally, if his average cost remains unchanged the marginal unit must have cost him exactly Rs. 15. In other words, in the third case, his marginal cost and average cost are equal. Now the size of a firm is optimum when its average cost has stopped falling and has not yet started to rise. In other words, *when the marginal cost neither raises nor lowers the average cost (is equal to the average cost) the firm is of optimum size.* This is the same thing as to say that for the optimum firm the marginal cost is equal to the average cost.

11. Optimum Firm in Relation to Laws of Return. We have seen above the fact that when a firm has reached its optimum size its marginal cost equals its average cost. Since its average cost remains constant its marginal cost is also constant. Thus to an optimum firm the Law of Constant Returns applies. It produces its additional units at a uniform cost per unit whether conceived, as average costs or as marginal costs.

If the size of the firm is smaller than the optimum, or in other words, if its expansion leads towards the optimum point, every additional unit will be produced at a falling cost. Since the marginal cost will be falling its average cost also must fall. In other words such a firm will obey the law of Increasing Returns.

If the size of the firm has passed the optimum size, in other words, if its expansion leads away from the optimum point, every additional unit will be produced at a rising cost. Since the marginal cost will be rising, its average cost will also be rising. In other words, such a firm will be obeying the Law of Diminishing Returns.

We have already seen in the Department of Production that the Law of Diminishing Returns is a matter of *defective proportions of factors* combined for production. If the factors are combined in proper proportions the tendency to diminishing returns disappears. Under perfect competition factors are perfectly mobile, therefore, a combination tends to take place which gives the lowest cost per unit under the given conditions. The unit of production, in other words, tends to become of optimum size. In the actual world competition is not perfect, hence in spite of all efforts the best combination of factors may not be possible. This may either be due to the difficulty of moving factors from one use to another or the fact of a high degree of scarcity of a particular factor, *e. g.*, land, which cannot be increased. In such cases the Law of Diminishing Returns is inevitable.

The Law of Increasing Returns may be due either because, to begin with, the size of the firm is too small and hence as the size grows economies of large scale production are available. Or certain indivisible factor or equipment is being used (expensive management,

expensive machinery, etc.) and further units can be produced at a less than proportionate increase in costs. This applies to firms or industries in which the supplementary costs form a high proportion of the total costs.

Thus both the laws, that of Increasing and of Diminishing Returns, are the result of two sets of circumstances (i) the matter of proper proportions ; and (ii) the matter of size. In many cases these circumstances are interdependent. Let us take a concrete example.

Let us suppose a factory is installed to produce sugar with very efficient but expensive machinery. Suppose the machinery is best utilized if 15,000 maunds of sugar were produced in a year. Suppose the sugar that is actually being produced is, say, 10,000 maunds. If, therefore, the size of the output is increased, average cost per unit as well as marginal cost will go down since the expense of the machinery will get distributed over a larger number of units. This will go on until the output produced is the optimum, i.e., 15,000 maunds. Up to that point the Law of Increasing Returns will apply. The cost per unit will go down partly because of the use of the indivisible factor, and partly because of other economies of scale which we have studied elsewhere.

When the firm has reached its optimum size both marginal cost and average cost will stop falling and will become equal. For a time constant returns may be available. At this stage the Law of Constant Returns will be in operation.

Now suppose the firm expands still further. The ideal proportion of the factors will get disturbed. For instance, it may become too unwieldy to manage, or raw materials may become deficient, etc. Once the proportions have been disturbed from their equilibrium position some factors will become scarce relative to others. All factors will not increase in the proportions which give the best combination, and hence the Law of Diminishing Returns will set in. We may either say that the size of the firm has passed the optimum point or that certain factors fail to increase, therefore defective proportions have resulted. Either the size must be decreased and the old optimum point re-established or the scarce factors must be increased so that a new optimum at a larger size is achieved. If it is not possible to do either, the Law of Diminishing Returns will operate. In the real world it frequently happens that neither can the scarce factor be increased nor can the relatively less scarce factor moved out of the firm or industry. This may be due to the lack of perfect competition or absolute scarcity of a factor like land. Hence the Law of Diminishing Returns is frequently found in operation.

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CHAPTER XX

THE THEORY OF NORMAL PRICE

1. Introduction. In the last chapter we have explained what is meant by the cost of production. We analysed such a cost in its component parts. We conceived of what is called the marginal cost of production and tried to explain the marginal cost with reference to the various conceptions of the producing unit or the firm, i.e., whether marginal, representative or optimum firm. Our next task is to study the relation between the marginal cost of production and value. In what sense marginal costs may be said to determine normal price?

2. Price in Relation to Marginal Cost. We have already seen that so far as any individual firm is concerned since its output forms an insignificant proportion of the total output, it can expand its output without appreciably affecting price. Price, however, is affected if a large number of firms increase or decrease their output or if new firms come into the industry or old firms move out of it. *An individual firm, however, adjusts its output to the prevailing market price. It produces an amount for which its marginal cost of production is equal to the price.*

In the words of Benham, "An increase in the output of a firm under perfect competition will not perceptibly reduce the price of its product. Its receipts will be increased by the full (present) selling price of the additional output. The marginal revenue from an extra unit will be the full price of that unit, so that the rule, that an entrepreneur will equate marginal cost and marginal revenue means that he will equate marginal cost and price. Every firm will tend to produce that output for which marginal cost equals price. Differences in efficiency between firms will show themselves not in differences in marginal costs but in differences in output."¹

When competition is perfect each firm tends to be of the optimum size. *The price that prevails in the long run, therefore, must be high enough to cover the average cost of production of the optimum firm.* We have seen, in the previous chapter, that for such a firm average cost is equal to the marginal cost.

The forces of competition thus tend to establish a price which covers the cost of production (marginal-average) of the optimum firm. If the market price rises above the average cost of the optimum firm and stays there long enough, the firms in the industry will be able to make higher profits by producing the output near their optimum output and selling it at a higher price. As a result new firms will be attracted to the industry, the total output will increase and the price will fall to the level of the cost of the optimum firm. In the opposite case if the market price falls below the cost

1. Benham—Economics (1940), p. 195.

of the optimum firm, no firm in the industry will be able to cover its costs. Some firms would leave the industry, the total output will be reduced, until the price will rise to a level high enough to cover the cost of production of the optimum firm. *Under perfect competition, therefore, the price offered for a commodity tends to equal the average (and marginal) cost of production of the optimum firm.* In the long period both prime and supplementary costs must be covered. But during the short period, prime costs are more important and fixed or supplementary costs do not enter marginal cost. Longer the period, the larger the number of items which will enter the marginal cost.

In case of imperfect competition or monopoly, the price will exceed the marginal costs. He will not increase his output unless the additional (marginal) cost is less than the price.

3. Does Marginal Cost Determine Price? But to say that price equals the marginal or average cost of production of the optimum firm does not mean that it is "determined" by such cost in the sense of causing it to be what it is.

When we say that price is normally determined by cost of production we mean that the costs include normal profit. But profit varies with variation in price. Hence a change in price affects costs by affecting its one component, *i.e.*, profit.

Further, costs cannot determine price of irreproducible commodities, because such commodities have no costs.

Take another element of costs say wages. If wages rise, costs rise and prices must rise. But if prices rise, because the demand for the commodity has increased, wages will also rise. It is thus not a relation of cause and effect but of mutual causation. One does not determine the other. In fact, costs no more "determine" the prices of finished products than the latter determine the former. All prices are interdependent.¹ Cost is nothing else but a sum total of the prices of various factors used in the production of the commodities.

During the 19th century there was a considerable controversy whether price is determined by utility or by cost of production. The Classical School of British Economists following Adam Smith believed that cost of production determined value. Later in the century Jevons in Great Britain and some Continental economists evolved a Utility Theory of value. Marshall presented a synthesis of both kinds of forces those acting on the side of demand and those on the side of supply. He argued that utility and cost are both equally important. Let us, therefore, study Marshall's Theory before coming to later views. The study of Marshall's view is important because much of what he wrote still holds the field and also because his views have dominated the English-speaking world for more than a generation. Many eminent economists still adhere to Marshall's position.

1. Benham—Economics, (1940) p 194.

4. **Marshall's Theory of Value.** Marshall gives equal importance to cost of production and marginal utility in the determination of value. His famous analogy of a pair of scissors may be quoted : "We might as reasonably dispute whether it is the upper or the under blade of a pair of scissors that cuts a piece of paper, as whether value is governed by utility or cost of production. It is true that when one blades is held still, and the cutting is effected by moving the other, we may say with careless brevity that the cutting is done by the second, but the statement is not strictly accurate, and is to be excused only so long as it claims to be merely a popular and not a strictly scientific account of what happens."¹

5. **Importance of Time Element.** The relative importance of these two influences, however, differ with time. "As a general rule," says Marshall, "the shorter the period which we are considering the greater must be the share of our attention which is given to the influence of demand on value ; and the longer the period the more important will be the influence of cost of production on value. The actual value, at any time, the market value, as it is often called, is often more influenced by passing events and by causes whose action is fitful and shortlived, than by those which work persistently. But in the long periods these fitful and irregular causes in large measure efface one another's influence ; so that in the long run persistent causes dominate value completely. Even the most persistent causes are, however, liable to change. For the whole structure of production is modified and the relative costs of production of different things are permanently altered, from one generation to another."² Changes occur both in conditions of demand and supply over a period of time.

Thus Marshall gives great importance to the *element of time*, in the determination of value. He sums up his position in the following words : "Four classes stand out. In each price is governed by the relations between demand and supply. As regards *market* prices, supply is taken to mean the stock of the commodity in question which is on hand, or at all events "in sight". As regards *normal* prices, when the term normal is taken to relate to short periods of a few months or a year, supply means broadly what can be produced for the price in question with the existing stock of plant, personal and impersonal in the given time. As regards *normal* prices, when the term normal is to refer to *long* periods of several years, supply means what can be produced by plant which itself can be remuneratively produced and applied within the given time ; while lastly there are very gradual or *secular* movements of normal price, caused by the gradual growth of knowledge, of population and of capital and the changing conditions of demand and supply from one generation to another."³

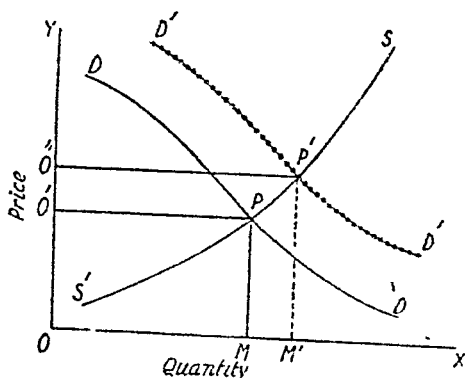
6. **A Concrete Illustration.** Let us further explain Marshall's Theory of Normal Price by an illustration. Take the case of a com-

1. Marshall, op. cit., p. 348.

2. Ibid., pp. 349-50.

3. Ibid., pp. 378-79.

modity, say radio sets. Suppose at a particular time due to the temporary equilibrium between supply and demand the market price of radio sets is indicated by PM in the diagram given below :—



SS' is the supply curve and DD the demand curve, giving PM (=OO') the equilibrium price at the moment.

Let there be now a rise in demand which is shown by the dotted curve $D'D'$ in the diagram. The new equilibrium price will be $P'M'$ (OO'') which is higher (by $O'O''$) than the old price. If the rise in demand is due to temporary causes, it will disappear after a short time and the old price PM will be re-established.

But suppose the rise in demand is permanent. What will happen to the market price in the long run? In other words what will be the normal price? The normal price will depend upon the marginal cost of production of the larger supply that will come forth to take advantage of the larger demand and higher profits. For some time the factors of production that are already in the radio industry will be worked under greater pressure, or factors from neighbouring industries or similar industries will be attracted to the radio industry. If these factors are not efficient, marginal costs may go up for a time. The price that will prevail during this stage is called the subnormal price. This is the short-period normal price and stands midway between the market price and the long-period or real normal price.

If the demand still continues high, new factors of production will move into the radio industry. New labour will be trained for this work. New capital will find investment in this industry, etc. On what terms are these factors attracted? The cost of production of these factors of production must be met in the long run. Supply will mean what can be supplied with the help of these factors of production. The emergency arrangements will now give place to permanent arrangements for the new supply. The new supply price

will depend upon the way the marginal cost of production behaves in the industry concerned.

In the radio industry, most probably the marginal costs per unit will fall as greater volume of radio sets have to be produced. This is because such an industry is likely to obey the Law of Increasing Returns. In the case of an industry which obeys the Law of Diminishing Returns the marginal cost and hence the long-period supply price will tend to rise. If the tendency towards Diminishing Returns is exactly balanced by other factors which tend towards Increasing Returns the industry may be said to obey the Law of Constant Returns. In other words, marginal cost or long-period supply price and hence normal price will tend to return to its old level that is the level at which it stood before the rise in demand occurred.

The same reasoning will apply if we assume a fall in demand for a sufficiently long period to allow forces on the side of supply to adjust themselves to the changed conditions. *Normal price will be higher, lower or it will remain the same according as the industry obeys the Law of Increasing, Diminishing or Constant Returns, respectively.*

7. Marshall's View of Marginal Costs Determining Price. Thus according to Marshall, normal price is determined by the marginal cost of production of the commodity concerned. Marginal cost is here conceived of in two ways. (1) It is the average cost of production of the marginal firm or (in agriculture) marginal farm, (2) or the marginal cost of production of the Representative firm. In agriculture or industries which produce larger output in accordance with the Law of Diminishing Returns the concept of the marginal farm or the marginal firm, as the case may be, is used. It is the firm or the farm, the output of which is necessary to meet the market demand. Its cost of production must be met. This producing unit has the highest cost of production among those supplying the same market. If the price falls a little, or cost of production rises a little, such a firm cannot continue to produce. If its product has to form a part of the supply to meet the existing demand, the price must be high enough to meet its costs of production, including normal profits.

When dealing with industries that obey the Law of Increasing Returns Marshall uses the concept of the Representative firm as explained earlier. The marginal costs of production of such a firm must be met. Once the price is determined by this marginal cost other firms increase their output to equate their marginal costs to this price.

8. Does the Price Actually Coincide With the Marginal Cost? Very seldom. They only tend to coincide in the long run but actually do not. What tends to happen in the long run may actually never happen. As Prof. Brij Narain says, "I may be ever tending to grow wiser and wiser, and yet remain a fool to the end of my days." The reason is that in order to equalise marginal cost with the price

the output will have to be increased, by infinitesimally small increments which in actual practice is not possible. Actually the output is increased in fairly large units and few manufacturers make fine calculations for equalising marginal cost and price in order to satisfy the dictates of economic theory. "Price is commonly such that from ten to fifteen per cent of the output is produced at greater cost and the rest at less."¹

Further the world is dynamic and not stationary; changes in technique are constantly taking place. The position as regards both demand and supply is constantly shifting. In these circumstances it is futile to expect that price and marginal cost will ever attain a position of equality.

Also, *price itself enters into the cost*. How can the two be equalised? Value of the service of the fixed plant has to be ascertained in order to calculate the cost. But this depends on the expected price of the product that the plant produces. "Much of what is usually termed cost of production is not really cost element that is given independently of the price of the product but a quasi-rent, or a depreciation quota which has to be allowed on a capitalised value of expected quasi-rents, and is therefore dependent on the prices which are expected to prevail."²

9. Does the Marginal Unit Govern Price? It is not true to say from scientific point of view, that the utility of the marginal unit determines or governs value. Margin is not the cause of value but itself, together with value, is caused or determined by the interaction of the forces of demand and supply. In the words of Marshall, "Marginal uses and costs do not govern value, but are governed together with value by the general relations of demand and supply. Marginal uses *indicate* but *do not govern* value."³ If the demand for a commodity increases, the position of the margin will itself be shifted. Similarly, a change in supply will move the margin and make a difference in the marginal costs. Price is really determined by the equilibrium between aggregate demand and aggregate supply and not by either the utility of the marginal unit or the cost of production of the marginal unit.

However, as the marginal unit forms a part of the aggregate supply, it does exert some, not the sole, influence on value. If it were not there, value would be different.

10. Average Cost and Price. Price in the long run approximates to marginal cost and not average cost. The two costs do not necessarily coincide. There is, however, a tendency for the average and marginal costs to coincide. For example, if the marginal cost is higher than the average cost, then the entrepreneur's profit is high on average, because the price, which coincides with marginal cost, is

1. The Trend of Economics edited by Tugwell, p. 77.

2. Hayek—Collectivist Economic Planning, pp. 226-27 quoted by Brij Narain in his Principles, p. 147.

3. Principles, p. 410.

higher than the average cost. The entrepreneur will be tempted to produce more. The additional output will be secured at a higher average cost. Production will continue to increase till the average cost has caught up the marginal cost. In case the average cost is higher than the marginal cost (or price) the entrepreneur is losing. He will curtail production which will result in lowering of the average cost. The two will ultimately tend to coincide.

11. Recent View. Let us see in what respects recent economic analysis differs from Marshall's regarding the relation between marginal cost and normal price, under conditions of perfect competition.

Marshall gives two conceptions of marginal cost of production, *i. e.*, average cost of the marginal firm and marginal cost of production of the average or representative firm. The former is applied to industries obeying the Law of Diminishing Returns and the latter to those obeying the Law of Increasing Returns. Marshall makes the marginal firm a firm producing at the highest average cost. The marginal cost of production of Marshall's representative firm is also the cost of the units produced under the least advantage, compared with the cost of units produced before the margin is reached. Recent analysis conceives of the marginal cost as the cost per unit of the optimum firm, *i. e.*, a firm which is producing under the most favourable circumstances. We have already seen why the concept of the optimum firm is superior to Marshall's representative firm.

From the point of view of normal value Marshallian view divides industries into different categories according to the laws of production which they obey. There are, for example, industries which are subject to the Law of Diminishing Returns and those which conform to the Law of Increasing Returns. In the former case normal value equals the cost of production of the marginal firm and in the latter case that of the representative firm. But modern analysis does not classify firms of an industry into different categories according to the laws of production to which they conform. The laws of production are conceived of as matters of proportions of combinations of factors of production. They may form different stages in the evolution of the same firm. Under perfect competition all firms tend to become optimum firms producing at a uniform marginal and average cost. It is, however, agreed that the optimum is not a fixed point. It changes with changes in the technique of production and organization.

Disagreement with Marshall's Theory, however, does not end here. When we go behind the 'money' cost of production and investigate the forces acting behind such costs, the new analysis fundamentally differs from Marshall's and that of the English Classical School. Marshall, as well as his predecessors of the cost of production theory, agree that money cost of production do not fully explain value. Behind money costs are real costs. These real costs are variously conceived of as (i) Painful efforts and sacrifices of workers, *i. e.*, the Labour Theory of value ; (ii) Painful efforts and

sacrifices of workers along with sacrifice of waiting, *i. e.*, Cost of Production Theory. But recently the real cost of production is conceived of as the next best alternative use forgone, *i. e.*, Opportunity Cost. It explains cost of production in terms of utility. This is the Marginal Utility Theory of value. The latest trend among economists is towards the acceptance of this last theory. In the next chapter all these theories are considered in their historical order.

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Marshall—Principles of Economics.

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CHAPTER XXI

REAL COST IN RELATION TO VALUE

1. Introduction. In the last two chapters cost of production was taken to mean money cost of production or expenses of production as they are called. These expenses are extremely important from the point of view of the producer. The price of the product, in the long run, must cover the expenses, inclusive of normal profits, otherwise production under the system of private enterprise (capitalism) cannot continue.

But from the point of view of the community as a whole money costs do not tell the whole story. Money is after all only a measure of value.

From the Society's point of view it is the real cost which is more important. Real cost means the exertions and the sacrifices which various members of the society have to undergo to produce a commodity. The workers have to put in effort, the capitalists have to save and wait for the reward and the landlords have to forgo the use of their property ; only thus production machinery can be set in motion. The production of a commodity, therefore, entails various types of efforts and sacrifices and they constitute the real cost of production.

Money cost and the Real cost do not coincide. It is very seldom that the real cost of a commodity may be equal to the money cost. As Marshall puts it, "If the purchasing power of money in terms of effort has remained about constant, and if the rate of remuneration for waiting has remained about constant, then the money measure of costs corresponds to real costs ; but such a correspondence is never to be assumed lightly." ¹ Thus there is very little connection between money costs and real costs. The two can never be equal in a world of change, as our world is, whether we consider the long period or the short period. The value of land depends on scarcity. The question of cost in terms of efforts and sacrifice does not arise. The earnings of cinema stars, professors, coolies, sweepers, peasants and business men, etc., seldom correspond to the respective efforts and sacrifices undergone by each class.

Usually cost means money cost. But Money costs ultimately are nothing else but prices that the producer has to pay for the various agents of production which he brings together to set the process of production in motion. We, therefore, cannot explain one set of prices in terms of another set of prices. Several attempts have been made to get out of this difficulty. Some have made labour as the ultimate measure and determinant of value ; others have included labour with waiting (*i.e.*, capital). More recently utility has been made to explain

1. Marshall—Principles of Economics, p. 360.

short-period as well as long-period value. There are thus three theories of value based on these three views respectively (1) Labour Theory of Value, (2) Cost of production Theory of Value and (3) Marginal Utility Theory of Value. Marshall's position is midway between the Cost of Production Theory and Marginal Utility Theory. In this synthesis, however, his ideas of cost of production are merely an elaboration of the conception of the cost of production held by those, like Mill, who explained value in terms of "efforts and sacrifices."

2. Labour Theory of Value. The Labour Theory is associated with the names of Adam Smith, Ricardo and Karl Marx. Before Adam Smith, Petty and Locke also had regarded labour as the source of value.

Adam Smith regarded labour as the ultimate standard of value. "The real price of everything, what everything really cost to the man who wants to acquire it," wrote Adam Smith, "is the toil and trouble of acquiring it.....what is bought with money or with goods is purchased by labour, as much as what we acquire with toil of our own body."¹

Smith, however, believed that only in earlier stages of society labour formed the basis of exchange value. Afterwards, since land became scarce and capital accumulated, the owners of these also had to be paid, and labour ceased to be the only cost of production. Thus he was led to the Cost of Production Theory. Ricardo, on the other hand, thought that even in the contemporary world value of a commodity, or the quantity of any other commodity for which it will exchange, depends upon the relative quantity of labour which is necessary for its production.²

Ricardo did not ignore land and capital as agents of production. The cost of land, according to his view, did not count because the price of grain was governed by the cost of production on the poorest land that was under cultivation, where no rent had to be paid. As regards capital it was the result of labour applied in the past.

Adam Smith had admitted that labour varied in quality and hence could not be compared except in very primitive societies to which alone according to him the labour theory applied. But Ricardo, since he believed labour to be the foundation of value in advanced societies as well, had to explain this difficulty of comparing different qualities of labour. His explanation was that these differences were adjusted in the market so that each kind of labour once formed was liable to little variation. "If a day's labour of a working jeweller be more valuable than a day's labour of a common labourer," says Ricardo, "it has long been adjusted, and placed in its proper position in the scale of value." But this explanation is far from convincing.

A common objection against the labour theory is that it does not explain the value of irreproducible goods. To this Ricardo

¹ Adam Smith—*Wealth of Nations*; Book I, Chapter V.

² *Principles of Political Economy and Taxation* in works of David Ricardo by McCulloch [p. 9].

replied that "there are some commodities the value of which is determined by scarcity alone.....their value is wholly independent of the quantity of labour originally necessary to produce them, and varies with the varying wealth and inclinations of those who are desirous to possess them." In modern language he meant that the marginal utilities of the consumers determined the value of such goods. So far he was in agreement with modern thought. But this explanation cannot satisfy the critics of the labour theory since it proves the inadequacy of this theory, if it proves anything at all.

3. **The Socialists and the Labour Theory.** The Ricardian theory of value had a special appeal to the socialists. Since labour was the sole originator of value, but actually wages formed a small portion of the total value thus created, it was easy to argue that the capitalist by taking the lion's share of the produce exploited the workers. Following Rousseau the socialists Thomson, Gray and Bray had already developed the theory of capitalistic exploitation. Rodbertus and Karl Marx made it the central feature of their work.

Marx, the father of scientific socialism, gave his views on value¹ in his monumental work, *Capital*, where he made a strong attack on the capitalistic system. Marx regarded value as crystallised human labour. To him the value of a commodity was the "labour time socially necessary" for its production. This he defined as the labour time "required to produce an article under the normal conditions of production, and with the average degree of skill and intensity prevalent at the time."¹

Marx explained capital in the same way as Ricardo had done in terms of past labour. As regards differences in quality his view was that "skilled labour counts only as simple labour intensified." A given quantity of skilled labour he considered equal to a greater quantity of simple labour. "Experience shows," he wrote, "that this reduction is constantly being made. A commodity may be the product of the most skilled labour, but its value, by equalising it to the product of the simple skilled labour, represents a definite quantity of the latter labour alone." These proportions between skilled and unskilled labour are fixed by the force of custom according to Marx. He attributed the higher value of skilled labour to the fact that such labour power costs more time and labour to produce than unskilled or simple labour power.²

4. **Marx's Theory of Surplus Value and Exploitation.** From his labour theory Marx developed his theory of Surplus Value. He argued thus: For the worker to continue production instruments and maintenance are necessary which he does not possess. He, therefore, sells his labour to the capitalist. For the capitalist it is not necessary to pay the worker the full value of what he

1. *Capital*: Vol. I, Pt. I, Chap. I, Sec. I.

2. *Ibid.* Pt. III, Chap. VII, Sec. 2.

competitive equilibrium. Under competition surplus value should disappear. In the words of Whittaker, "Under conditions where the output of a single firm is small in relation to the total production of the industry (as was probably the case at the middle of the 19th century in the English textile industry from which Marx drew many of his examples) any expansions in the output of one firm could have little effect on the market price of the commodity produced. The surplus value, per unit of output, therefore, would remain virtually unchanged. More units being produced, it follows that the total surplus value received by the firm would be increased. Obviously the firm would be under the inducement to expand its output. Not merely one but all firms in the industry would be in this position. Yet, if all expand, the market price of the product would decline, causing the surplus value to diminish, and ultimately to disappear."¹

Thus, Labour Theory of Value, though superficially appearing in accordance with the ideas of equity and justice, fails to give an adequate explanation of value.

6. The Cost of Production Theory of Value. It was Cantillon who defined value (or intrinsic value as he called it) of a commodity as "the measure of the quantity of land and labour entering into its production, having regard to the fertility or produce of the land and to the quality of the labour." This, however, did not necessarily coincide with the market value of the commodity which depended on demand of the consumers. He believed further that given the time, supply adjusted itself to demand. If the commodity was scarce price rose and production expanded. If it was plentiful the opposite took place. Thus he laid the foundations of the classical theory of value which was further built upon by Adam Smith, Senior, and J. S. Mill.

What Cantillon called intrinsic value Adam Smith called "natural value" and later on Marshall called it normal value. The 'natural' or 'normal' value depended upon the cost of production according to the theory under consideration.

Ricardo explained capital by calling it past-labour. But Senior developed the concept of interest as payment for waiting or abstinence. He argued that abstinence as well as labour was necessary for production. Abstinence according to him was sacrifice, so that real cost of production, which according to him determined value, consisted not merely of labour but labour and abstinence. Except that he excluded the rent of land as an element of costs, Senior's theory followed Adam Smith closely. He was conscious of the fact that since competition is never perfect value coincided with the cost of production thus defined only in the long run.

J. S. Mill while accepting abstinence as an element of cost elaborated the theory further by bringing in the influence of the "laws of returns." Like Senior he also regarded the conformity of value

1. Whittaker : A History of Economic Ideas, pp. 429-30.

to costs as a long run phenomenon. But Mill changed the basis of discussion of costs from real costs of labour abstinence to money costs. Marshall took over the cost theory of value at this point from Mill.

For Marshall, however, cost of production was only one blade of the pair of scissors, the other being marginal utility. Marshall attempted to reconcile money costs and real costs by saying that while money costs were important from the point of view of the employer, from the point of view of the community real costs (painful efforts and sacrifices of waiting) were also fundamental. Moreover, he held that if the purchasing power of money, in terms of efforts, has remained about constant, and if the rate of remuneration for waiting has remained about constant then the money measure of costs corresponds to the real costs, but he wisely adds "such correspondence is never to be assumed lightly."

We have already noted that the concept of cost of production as expenses of the entrepreneur, however useful for purposes of calculation, did not explain the problem of value, since it meant explaining prices of commodities in terms of prices of factors of production. Real cost of production in the sense of painful efforts could not be added unless converted to money costs. Apart from this difficulty of the conception of cost there were other weaknesses of the cost of production theory of value.

7. Criticism of the Cost of Production Theory. The cost of production theory does not adequately explain the phenomenon of value for the reasons given below :—

(i) The theory does not allow for the misdirected labour and capital. A palace may be built in a desert at an enormous cost but unless there is demand for it, it will have no value. A patented article may meet competition from better substitutes and thus be driven out of the market.¹

(ii) Value of a commodity may change after it has been produced. A sudden cool shower may depress the price of ice or a heat wave may raise it irrespective of the cost of production. In fairness to the holders of the theory it may be said that they only explain long, term value in terms of costs while market value, they agree, fluctuates according to changes in demand.

(iii) The theory does not explain scarcity value especially the value of irreproducible goods like statues and pictures by old masters, etc. The values of these things have no relation to their cost of production.

(iv) In some cases it is not possible to determine the cost of production of particular goods or services. For example in the case of by-products or articles produced jointly like wheat and straw or wool and mutton, or the cost of running an excursion train.

(v) Moreover, cost of production varies with different firms and for different units in each firm. Which of these costs determine value ?

1. Marshall : Principles of Economics, p. 350.

The real fact is that value is determined by the relationship between scarcity on the one hand and demand on the other. The scarcity may be due to high cost of production or it may be due to any other cause. When it is due to high cost of production it merely means scarcity of the factors of production in the light of the variety of uses or alternative demands calling for their service. Thus it is possible to explain cost of production in terms of utilities or competing demands for the scarce factors of production. This new concept of costs is associated with the marginal utility theory of value. Let us see how this theory was developed.

8. Cost of Re-production. It is very seldom that the normal value of a commodity is equal to the cost of production. In a dynamic world where technique is constantly, changing cost of production, in the long run, is not likely to have any approximation to the cost of production today. Price in the long run, therefore, will not have much to do with the cost which has been incurred already but it will tend to approximate to the cost which, may have to be incurred if the commodity has to be reproduced. Carey has therefore, suggested cost of reproduction to take the place of cost of production as an explanation of normal value.

But it does not improve matters. As Marshall points out normal cost of production and normal cost of reproduction are convertible terms. What would be the cost in the long run really means what would have to be spent if the commodity has to be produced again, *i.e.*, cost of reproduction.

Although it may be conceded that there is a closer approximation between the price and the cost of reproduction than between price and cost of production, yet it cannot be said that cost of reproduction determines value. All the objections that have been put forward against cost of production of theory may be repeated here.

Cost of reproduction can have some influence on price if one can conveniently wait till the commodity can be reproduced. Till the new supplies are forthcoming, price will depend on the intensity of demand.

There are certain cases when the cost of reproduction has nothing to do with price. In the words of Marshall, "there is no connection between cost of reproduction and price in the cases of food in a beleaguered city, of quinine the supply of which has run short in a fever-stricken island, of a picture by Raphael, of a book that no body cares to read, of an armour-clad ship of obsolete pattern, of fish when the market is glutted, of fish when the market is nearly empty, of a cracked bill, of a dress material that has gone out of fashion or of a house in a deserted mining village."¹

9. Development of Marginal Utility Theory of Value. Early writers like Barbon (1640-1698), Law and Jurgot (1727-1781)

1. Marshall—Principles of Economics, 1936, p. 402.

had based value on utility. It was Lauderdale (1759-1830) who argued that both utility and scarcity were essential for value. He established relation between intensity of a man's desire for a commodity and its value and was aware of the nature of elasticity of demand. On the side of production or supply he followed Locke, Cantillon and Adam Smith (1723-90) while on the side of demand he anticipated the later marginal school.

F. W. Lloyd during the thirties of the last century set down more clearly the relationship between utility and value. He pointed how with increase in supply of a good the value a person puts on it diminishes. This was what was later called the Law of Diminishing Utility. He was also aware of the concept of marginal utility. He identified value either with marginal utility, or cost of production whichever was less.

Senior (1790-1864) while recognizing the principle of diminishing utility pointed out that man demands variety and luxury as a consequence of the insatiable nature of human wants. Though he appreciated the importance of utility, Senior supported the cost of production theory of value. He was unable to present a synthesis of the forces of supply and demand, which Marshall had to accomplish later.

Writing about the same time as Senior in England (mid 19th century) were Longfield in Ireland, Von. Thunen in Germany and Dupuit in France. The former two anticipated the Marginal Theory of value in a remarkable manner, though they were primarily concerned with the problems of distribution. Dupuit clearly represented the principle of diminishing utility and illustrated it, by a diagram. He also arrived at the concept which was later named 'Consumer's Surplus' by Marshall. Dupuit called it "relative utility"

The Marginal school was much more clearly anticipated by the German economist H. H. Gossen (1810-1856). His doctrine was almost identical with that of W. S. Jevons' whose book appeared at the same time (1871) as Gossen's, though Jevons was not aware of it

About this time (1870) a new school of economists appeared in three different countries of Europe, Carl Menger (1840-1921) in Austria, Walras (1834-1910) in Switzerland and Jevon (already mentioned) in England. They wrote more or less simultaneously, and the result was a new system of Economics founded on utility. Their ideas were not entirely new, but they presented them more lucidly and systematically. They soon achieved a dominant position in Western Europe.

On the basis of "final utility" (later called marginal utility) Jevons elaborated his theory of exchange. His conclusion was: "The rates of exchange of any two commodities will be the reciprocal of the ratios of the final degrees of utility of the quantities of commodities available for consumption after the exchange is completed" In modern language he meant that values conformed to marginal utilities.

The influence of Marshall dominated English economic thought for a full generation after 1890. Thus in that country Jevons' marginal theory was pushed to the background. Marshall, however, incorporated Jevons' ideas in his theory on the side of demand, and Mill's doctrine on the side of production or supply and presented a dual theory of value exemplified by his famous analogy of a pair of scissors.

On the Continent of Europe, however, Jevons' contemporaries, Menger and Walras had greater influence.

They were followed by Bohm Bawerk and Weiser. This group is known as the Austrian School.

As contrasted with Marshall's idea of cost of production, already noted, Weiser developed the concept of *alternative, opportunity or transfer* cost. He made costs not merely "disutilities and pains" suffered on account of labour and abstinence but conceived them as "utilities and pleasures sacrificed." Thus he conceived of cost in terms of utility and made it possible to have a Monistic view of value as contrasted with Marshall's Dualistic view. Let us examine this view of cost and its significance in the theory of value.

10. Alternative, Opportunity or Transfer Costs. The American economist Davenport explains this concept as follows: "Suppose for example that a child has been given both a pear and a peach, that some predatory boy tries to seize them, and that the only method of saving either is to drop one, say the pear, in the wayside weeds, and to run for shelter with the peach while the aggressor is picking up the pear. What has the peach cost? True the peach was a gift. In a certain sense therefore it cost nothing. Nevertheless it is retained only on terms of forgoing the pear. The term cost seems not quite satisfactory to cover the case. Perhaps *displacement* or forgoing would be preferable. Or if one offers you your choice between a ride and an evening at the theatre, it is awkward to say that the acceptance of the one is at the cost of the other. Yet the resistance to the taking of the one is the letting go of the others. Or, if with a dollar which you have earned you are at a choice between buying a book or a pocket knife, and finally buy the book, the resistance overcome is best expressed, not by the labour devoted to the earning of the dollar, and not by the dollar itself, but by the alternative application of the dollar..... The highest cost of the book, the best test or measure of its worth to you was in the significance of its strongest competitor, the knife.¹

Conceived on these lines cost of production means not the effort and sacrifices undergone, but *the most attractive alternative forgone*, or the next best choice sacrificed. Real costs are thus not entities, ultimate and independent of utility, but they are sacrifices of competing demands.

11. Significance of Costs in this Sense. What is the significance of this concept of costs in relation to price? For the entrepreneur's costs are monetary expenses or payment necessary to

1. Davenport: *The Economics of Enterprise*, p. 61.

obtain command over scarce resources which have alternative uses. Socially speaking the cost of using a certain resource for a particular end is the sacrifice of the next best end to which this resource could be applied. This is because resources are scarce and have alternative uses. There are thus competing demands (depending upon the marginal utility of consumers) for the same resources. Since these resources are scarce certain demands are satisfied only at the sacrifice of other demands. The resources tend to move from those uses in which their demand price (marginal utility to the consumers in the aggregate) is lower to those in which it is higher until they tend to be distributed in various uses (for the production of various commodities and services) in such a way as to equalise their marginal utilities in the various uses.

It is thus the demand price or marginal utility which determines how much of a particular factor of production will be utilized for the production of a particular commodity. The supply of a commodity, therefore, ultimately depends upon the attraction offered by the demand price (or marginal utility) to the relevant factors of production. If this demand price is not high enough these factors will be used for the production of commodities the demand price for which is high enough to attract them.

12 Marginal Utility Theory of Value. According to the Marginal Utility Theory of Value *price is determined by marginal utility, or demand in relation to scarcity, of the commodity concerned. The sole function of the cost of production is to determine the degree of scarcity of the commodity.* It is the degree of scarcity that is important whatever the reasons for this scarcity. Thus the same principles will explain value whether the commodity is reproducible or not, whether the scarcity is due to the permanently fixed quantity of the commodity or due to difficulties of producing it, which latter may in its turn be due to the necessity of offering higher terms to attract factors for its production from other uses. But since higher terms are nothing else but higher demand price, it will be clear that demand price, or marginal utility of consumers on which it depends, is the ultimate determinant of value.

It may appear from the above that there is little difference between this view of value and that of the cost of production theorists, since they also hold that cost of production determines supply and in turn supply determines prices. In fact, in spite of the seeming similarity in certain respects, the ground is fundamentally different. *According to the marginal utility theory it is not the cost of production that determines value. Cost of production does influence scarcity, but even that indirectly and secondarily.* Scarcity is only a relative term. A thing is scarce in relation to the demand for it. As we have seen, scarcity may not be the result of cost of production as in the case of rare objects. The determining factor therefore is not the entrepreneur's costs nor the painful efforts but it is *competing demands. It is the competing demands to which supplies and cost adjust themselves.* The only

sense in which costs influence prices and value is the sacrifice of alternatives variously termed as displacement, alternative or opportunity costs. The demand price offered must in the long run cover those expenses of the entrepreneur which are necessary for withdrawing factors of production from their next best alternative uses. This conception of cost therefore is not independent of utility.

It is for this reason that the marginal utility theory in its most recent form is called the "Monistic" as contrasted with Marshall's 'Dual' explanation of value. For Marshall utility and cost were two independent categories and both contributed equally in the determination of value. The degree of their importance however varied with time. According to the monistic explanation the cost of production is also an aspect of utility and is not an independent category. Since costs represented alternative utility both supply and demand came to depend on utility."¹

The identification of forces behind supply and demand has been pushed even further by the Austrian School and their followers notably the English economist, Wicksteed. The latter has shown² conclusively that there is no fundamental difference between the psychological forces in the minds of the buyers and the sellers in the market. Below a certain price (called sellers' reserve price) the seller appears in the role of a buyer because he withdraws commodity from the market if the price falls below that level. In other words he purchases his own commodity, as it were, once this level of price has been reached. "It used to be a common custom at auction sales," write Briggs and Jordan, "of all kinds of sellers, whose identity was unknown to the crowd to actually enter into competition in order to force up prices."³

Marginal Utility Theory is now the most accepted theory of value. Though its foundations, as mentioned above, were laid by Jevons in England and a group of Continental economists (Weiser, Bohm Bawerk and Menger) collectively known as the Austrian School, in the last quarter of the 19th century, the theory in its most recent form is associated with the names of Wicksteed,⁴ Wicksell,⁵ Davenport,⁶ Cassell⁷ and others.

The Marginal Utility Theory has been summed up in the following words :

"The price of anything at any moment is determined by demand relative to supply, i.e., by the marginal utility of the amount available to the consumers on the market, such marginal utility representing the price at which that supply can be disposed of. Under free

1. Whittaker : A History of Economic Ideas, p. 458.

2. Wicksteed, Commonsense of Political Economy, Vol. 11, Ch. 4.

3. Briggs and Jordan : Text Book of Economics, p. 78.

4. Commonsense of Political Economy.

5. Lectures on Political Economy.

6. Economics of Enterprise.

7. Theory of Social Economy.

competition the normal price, or value *in the long run*, of reproducible goods approximates to marginal cost of production, and prices are always tending to equilibrium at that point where marginal utility as measured in money is equal to marginal expenses of production."¹

The Marginal Utility Theory is the most accepted theory of value, because

- (a) it offers an adequate explanation of value at all times, i.e., value at any given moment and value in the long run ;
- (b) it explains fluctuations in value consequent on variations in demand or supply or both ; and
- (c) it gives "the only satisfactory explanation of the value of rare, soiled, incomplete or damaged articles, the price of which has no reference to cost of production, and of such things as water and sunshine, which although of inestimable utility, possesses little or no value."

13. The Influence of Laws of Return on Value. Value at any given time is determined by demand relative to supply but in the long run it tends to approximate to marginal cost of production. It is on the cost of production that the laws of return exert their influence. Let us see how value is influenced by the three laws of return.

1. *The Laws of Diminishing Returns.* When an industry is subject to the Law of Diminishing Returns, the larger the production, the higher will be the cost per unit and, conversely, less is the production, less will be the cost. Now if demand increases, price will rise and supply will be stimulated. But the additional supply will be obtained at a higher average cost. Price will therefore continue to be high. If demand decreases, production will be curtailed. But because according to the Law of Diminishing Returns less production will mean less cost, therefore, price will tend to fall. In this case, therefore, price varies directly with supply. The larger the supply, higher the price and *vice versa*.

2. *The Law of Increasing Returns.* When an industry is subject to the Law of Increasing Returns, then the additional output is obtained at less than proportionate cost. If, therefore, demand increases additional supply will mean lower cost. Hence price will tend to fall. Price will rise immediately when demand increases but it will come down ultimately or in the long run as supply is increased to meet increased demand. If, on the other hand, demand decreases, production will decrease. Under Increasing Returns this would mean raising of the average cost. In this case, therefore, price varies inversely with supply, i.e., more supply less price and less supply more price.

3. *The Law of Constant Returns.* When an industry obeys the Law of Constant Returns the cost remains the same whatever

1. Thomas, S E —Elements of Economics, 1939, p. 178.

the scale of output. In case, therefore, supply has to be varied in response to variations in demand, the price will not be affected.

We must emphasise that the laws of return exert their influence in the long run, i.e., on normal value (long period price) and not on market value (value at any given moment).

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1. Adam Smith—Wealth of Nations.
2. Ricardo—Principles of Political Economy and Taxation.
3. Whittaker—A History of Economic ideas, pages 429-30.
4. Marshall—Principles of Economics, p. 350 onwards.
5. Jevons—The Theory of Political Economy, p. 95 onwards.
6. Davenport—The Economics of Enterprise, p. 61 onwards.
7. Briggs and Jordan—Text-book of Economics, p. 78 onwards.
8. Wicksteed—Commonsense of Political Economy.
9. Davenport—Theory of Enterprise.
10. Cassell—Theory of Social Economy.

CHAPTER XXII

INTER-RELATED VALUES

1. Introduction. So far we have studied value in relation to an isolated commodity. This was, however, only in the interests of convenience. In the actual world few commodities stand isolated whether we take the point of view of production or consumption. In a general way our demand for any particular commodity is directly or indirectly related to our demands for all the commodities that enter our range of consumption. This is so not only because some commodities are jointly demanded, e.g., milk, tea and sugar, and some can serve as substitutes of each other, like tea and coffee, but also because our incomes are limited. If we spend more on one thing we have to spend less on other things. Thus a fall in the price of wheat may enable us to consume more of milk and *vice versa*. Thus the various demands get inter-related. It is, therefore, more correct to speak of a system of demands rather than the demand for an isolated commodity. Our demand schedule for one commodity, therefore, depends upon our demand schedule for other commodities.

Similarly, supplies are also inter-related. Some goods are always produced together, others have alternative (or substitute) sources of supply. But in a general way the supplies of different commodities are inter-related because the factors of production are scarce in relation to demand for them for various uses. For instance if more land is used for growing wheat less can be used for other crops, etc. Similar is the case with labour, power and capital resources though with some modifications.

The interdependence of value due to limitation of resources of consumers and producers in general we have already accounted for while analysing the forces behind demand and supply. In this chapter we want to study certain special cases of interdependence on the side of supply and demand.

On the side of supply there are the cases of joint supply and composite supply, and on the side of demand those of joint and composite demands. These terms have already been explained in a previous chapter. How are the values of such commodities determined? Let us take them in turn.

2. Value of Joint Products. When two or more than two things are produced together they are in joint supply or are called joint products. For instance when mutton is produced, wool is also produced along with it. Same is the case with wheat and straw, cotton and cotton-seed, coke and coal gas, etc. How is the price of each separate product determined?

There is no essential modification necessary in the theory of value in order to explain the cases of joint products. The market

price is determined by the equilibrium of the respective supplies and demands of each. As regards normal price, the prices of joint products taken together must be high enough to cover the marginal cost of production of them again taken all together.

The difficulty, however, consists in the fact that it is not easy to find out the marginal cost of production of these products individually. Two circumstances can arise in such cases, i.e., either the two products (supposing they are only two) are always produced in the same proportion or (ii) their proportion can be varied. In the former case a rise in the price of one will be followed by a fall in the price of the other provided no corresponding change in the demand for the latter has taken place. In the second case since the proportions can be varied a rise in the price of one may not lead to the fall in the price of the other to the same degree as in the first case.

Let us take the example of mutton and wool which are joint products of sheep. Suppose the demand for wool increases, the price of wool in the market will go up. Production of wool will become more profitable. More sheep will be reared to increase the supply of wool. But this will also increase the supply of mutton. But suppose the demand for mutton remains constant. The price of mutton must fall to take away the additional supply from the market. But if by certain methods of breeding new types of sheep can be produced which yield larger proportion of wool to mutton, then it is possible to increase the supply of wool in a larger degree than the supply of mutton. In that case the price of mutton will not go down to the same extent as before.

Such changes in breeds were actually made in Australia and Newzealand. Before the days of cold storage wool was in greater demand for export while mutton had to be sold within the country. Australian farmers, therefore, concentrated on breeding the marino variety of sheep, the wool-yielding qualities of which were superior to mutton-yielding qualities. Later, when through methods of cold storage meat could be exported in large quantities, the opposite policy was followed. In place of marino sheep the farmers substituted cross-bred sheep which yielded larger quantity of mutton and smaller quantity of wool.

It is possible, however, in some cases to find out the marginal cost of production of each commodity separately by comparing different combinations of joint products. For instance suppose, a certain number of sheep of a certain breed yield a given quantity of mutton and a larger number of another breed, yielding more wool and less mutton, is required to produce the former quantity of mutton. Now the extra expense of rearing the larger number of sheep has resulted in the production of the extra wool. In the same way the marginal cost of mutton may be ascertained.¹ When separate marginal costs can be ascertained, then the joint products can be treated as separate commodities and their value determined as such.

1. See Henderson : Supply and Demand, pp. 68-69.

In any case the prices respectively of the commodities in question will be such as to cause them to be consumed in the same proportion as they are produced. *The total price paid must be high enough to meet the marginal cost of the commodities taken together, given sufficient time for necessary adjustments to take place.*¹

Joint Products are the Rule. In modern times industrial technique has developed to such an extent that few products are turned out alone. Joint products are the rule and the single product an exception. This is also due to the fact that the by-products which were just thrown on the scrap heap in the past are being put now to commercial uses. There is now a very wide range of commodities turned out by all manufacturing concerns. A textile mill is producing shirting, suiting, netting, towels, sarrees, etc. Iron and steel works produce agricultural implements, bolts and nuts, engineering tools, constructional material, etc. A sugar mill manufactures, besides various grades of sugar, sugar cubes, molasses, alcohol, confectionary, etc. A paper mill turns out all varieties of paper—packing paper, drawing paper, blotting paper, newsprint, writing paper, etc. All these are instances of joint products, cost of production is joint but the goods produced are so many. It is not possible to ascertain the separate cost of production of each variety. Their prices are therefore determined on the principle of joint supply. The phenomenon of joint products, therefore, occupies a special importance in the discussion of economic theory.

3. Value of Jointly Demanded Goods (or Service). *Commodities that are always demanded together are in joint demand*, for instance, pen and ink, motor cars and petrol, tennis balls and rackets, etc. But cases of derived demand are most significant in this connection. They consist of materials and services which go to the making of a final commodity. Their demand is derived from the demand for that final product of their co operation. For instance the various materials and factors required for house building (bricks, cement, iron, wood, etc.) are in joint demand. Their demand is also derived demand, since it is derived from the demand for houses.

The source of difficulty in such cases is that on the demand side they are related but on the side of supply each may have independent conditions and sources governing them. While, therefore, it may be easy to find their marginal cost of production it is difficult to separate their marginal utilities. How are the prices of such things determined?

Let us take a concrete example. Suppose the demand for houses suddenly goes up and their price rises. How will this rise in the price of houses affect the price of the various materials used in house building? The immediate result will be a rise in the demand for such materials and hence a rise in their prices. But the rise in the prices of each of them will not be in the same proportion because their conditions of supply are not the same. Moreover, it may be

1. For diagrammatic representation of Joint Supply (and Joint Demand), see Chapman: *Outlines of Political Economy*, p. 174.

possible to increase or reduce the demand of some of them by varying proportion of their combination. Several considerations, therefore, will determine the degree of rise in price in each case, elasticity of demand combined with the degree of scarcity being the main factor. Thus—

(a) Other things being equal the more scarce materials will show a higher rise in price. (b) It may be possible to reduce the proportion of certain materials in use if their prices rise too high. In that case to some extent such rise will be prevented. Cheaper substitutes may be available for some, hence their price will not rise so much. (c) Some materials may have high paying alternative uses and unless higher prices are paid for them by house-builders they might move to other uses. Their prices will rise more than otherwise. (d) If the cost of a certain material forms a very slight proportion of the total cost of the final product its price can rise quite high since it will not affect to any appreciable degree the price of the final product and hence its demand. If, however, the cost of a certain constituent (e. g., labour) forms a high proportion of the total cost of house-building its remuneration or price cannot rise very much since it will greatly raise the price of houses and hence decrease demand for them. This will again bring down the price of houses and thus will react on the price of the material or factor whose price was inordinately raised.

On the whole, therefore, the price of such goods is determined by the marginal utility of the product in the production of which they contribute. In the long run each must be used to such a degree as will equate its price to its marginal cost of production. In most cases it is not possible to separate the marginal utility of each of them individually.

In some cases, however, the marginal utility of a particular good of the group in joint demand can be calculated by taking two separate combinations in which its quantity is used in different proportions while the others remain constant. In the words of Henderson, "We can take the various possible combinations of the factors of production, and contrast two cases in which different quantities of one factor are employed, together with equal quantities of others. The extra product which will be yielded in the case in which the larger quantity of the varying factor is employed, can then be regarded as the marginal product (or marginal utility) of the extra quantity of that factor, we can say that the employment of this factor will be pushed forward to the point where this marginal product will be roughly equal to the price that must be paid for it."

Incidentally it is clear from the above that the relation between marginal utility and price holds good generally of the ultimate agents of production as much as of goods directly demanded by consumers. The rent of land, the wages of labour and the profit for capital tend to equal their (derived) marginal utilities or as it is sometimes called their marginal net products. But more of it later

in the Department of Distribution, which is merely an extension of the theory of value.

We may conclude that the price of the ultimate product at any given time depends on its demand in relation to its supply, but in the long run, must cover the total of the supply prices of the various constituents used in making it.

Can a particular set of workers in joint demand increase their remuneration by withholding their services?

If their services are indispensable their remuneration will have to be increased, otherwise production will stop. A check in the supply of their services will check production. The price of the final product (say houses) must rise. It must sufficiently exceed the sum total of the supply prices of the other factors. It will be out of this excess or margin that the non-co-operating factor (a particular group of workers) will be paid. Marshall enunciates the Law of Derived Demand thus :

“The price that will be offered for anything used in producing a commodity is, for each separate amount of the commodity, limited by the excess of the price at which that amount of the commodity can find purchasers, over the sum of the prices at which the corresponding supplies of the other things needed for making it will be forthcoming.”¹

There are certain conditions under which a certain group of workers will succeed almost invariably in raising their wages by withholding their supply. These conditions are :—

(1) The demand for the final product (say house) in the production of which the services of such people are required should be inelastic. If this condition is present a check in production is sure to raise its price which will enable the entrepreneur to pay more to the discontented group.

(2) The services of this group should be indispensable and no suitable substitute should be available. In case their services can be dispensed with, they will not succeed in securing an increase in their remuneration by a threat of non-co-operation.

(3) Their wages should form a small fraction of the total wages. In that case it will be easy for the entrepreneur to meet their demand for increased wages. It will mean only a small addition to his expenses and he will not mind it.

(4) The demand for other factors should be elastic and their supply should be inelastic so that even a small check in demand for them will decrease their supply prices. If the other factors are squeezable like this the non-co-operating factor will be able to raise its remuneration.

4. Value of Goods in Composite Supply. *Goods for which alternative sources of supply exist are called in composite supply since their supply is composed of the sum total of supplies from the*

1. Marshall—Principles of Economics, 1936, p. 383.

various sources. For instance salt can be obtained from salt mines and also by evaporating sea-water. But the most significant cases are those of the substitutes. Substitutes can be assumed to be practically the same commodity since they supply the same need, not in co-operation with each other as in the case of joint demand, but as rivals of each other. In the broadest sense all commodities within the range of a consumer's demand are rivals of each other since he can substitute one for another. Here we shall confine our attention to substitutes in the narrower sense of tea, coffee and milk as drinks, beef, mutton and fish as meat, wheat and rice as grains, etc. To the extent that they are not exact substitutes, our theory will not apply to them. But on the whole the price of one is related to the price of others. They tend to move in the same direction. Thus if the price of wheat goes up many people will substitute rice or the inferior grains in its place. The demand for such substitutes will raise their prices. On the other hand, a fall in the price of wheat will reduce demand for substitutes of wheat and hence lower their prices. *The total supply of all the substitutes in relation to the total demand will affect the price of each of them.* Their prices will not necessarily be the same unless they are perfect substitutes for each other which means practically the same commodity.

Usually they are not perfect substitutes. *Their prices move up and down together with a more or less fixed 'distance' from each other.* Thus their marginal utilities move together though they are not identical. *The price of each tend to get adjusted in the long run at points where its marginal cost of production equals its marginal utility to the consumers in the mass.*

5. Value of Goods in Composite Demand. *A good is said to be in composite demand if it can be put to more than one use. Its total demand is composed of its demand in all these uses taken together.* For instance, coal can be used in the railway engine, the factory boiler, for heating the rooms and for cooking purposes. Wheat can be used for making chapatis, for making English bread, for various kinds of sweets, etc. The price of coal and of wheat in its various uses tends to be the same. For instance if the demand for coal on the part of railways rise, coal will flow towards railways. Its supplies for other uses will decrease hence its price will rise for those uses as well. *The price of a commodity in composite demand is, therefore, determined by its marginal utility in all its various uses. The marginal utility tends to be the same since the commodity can move from one use to another. In the long run, its price as usual must be high enough to cover its marginal cost of production.*

6. Other Cases of Inter-related Value. Other cases of inter-related values are mostly extensions of the cases explained above. For instance there is the case of "multiple products." This is an extension of the idea of joint products. Many producers produce not one commodity but a wide range of products. A factory may produce several kinds of machines and also may perform repair work. A shop may sell miscellaneous kinds of goods. In fact such

cases are the rule rather than the exception. Railways perform various kind of services, e.g., carrying different classes of passengers and different qualities of goods. In such cases it is almost impossible to fix marginal costs of separate services performed. *The prices of such services (or goods) are fixed on the principle of what the traffic will bear.* This is called the *value of service principle*. The other principle, viz, *the cost of service principle*, is not generally applicable because exact cost of service cannot be ascertained. Railways do bear in mind this principle too when they charge more where greater speed is required, where handling of goods involves more in convenience and where risk of breakage is greater.

Take the case of railways. They carry gold as well as coal. Gold has high value and coal has low value. Obviously no uniform rate either based on space occupied or on weight will be practical. A uniform rate if too high will make movement of coal uneconomical, if too low it will not pay the railways to undertake transport service. The railways, therefore, charge according to what each of the traffic items can bear to pay. The losses incurred on moving coal are more than made up by gains made from gold, since gold can bear a much higher charge than coal can.

Similarly, retail shops charge very little profits on standard goods the prices of which are more or less uniform and can be easily ascertained. They make up by charging high prices of specialities that appeal to individual fancy. Producers of such goods and services seek to meet the primary and supplementary costs along with fair profits not on every individual item but on the total transactions undertaken by them. A uniform rate of profits will discourage many customers and will not give the producers or sellers maximum returns.

The case of *alternate supply* or *alternative products* is closely connected with the above. When the same factors of production can be used for supplying more than one product the producer will tend to supply those items which give him the maximum advantage. This is an extension of the case of joint products when several combinations are possible by changing the proportion of one or more of the products concerned. The producer reduces his activities in lines in which he meets loss and substitutes for these lines which are more profitable. In this way by varying the supplies the producers can influence their respective prices. When the producer is a monopolist his powers of influencing prices are much greater than when he is only one of the many suppliers. In the latter case he adjusts his supply to price prevailing in the market. But if a large number of producers produce one good at the expense of another their conduct will affect the prices of both the goods concerned. In this way the original differences in the profits of the two lines of activity will tend to disappear.

An example will make this clear. Suppose a shopkeeper finds that selling of razor blades at the prevailing price gives him little profit while selling of toilet soap is much more profitable. He will

increase the supply of soap and decrease the supply of blades. Suppose a large number of sellers (or producers) come to the same conclusion. The supply in the market of blades will be greatly reduced hence their price will go up while the supply of soap will be greatly increased and its price will go down. This will continue until the normal profits from both these lines of business will be equalised.

In actual fact, however, the sellers may go on selling blades at nominal profits to attract customers and more than make up by selling fancy toilet soaps at high profits. In such a case the disparities of profits in the two lines will continue.

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CHAPTER XXIII

VALUE UNDER MONOPOLY

1. **Introduction.** In our study of value in the previous three chapters we assumed that perfect competition prevailed among the buyers as well as the sellers. In this chapter we shall assume the opposite condition, i.e., that of monopoly. Broadly speaking the term monopoly is used to "cover any effective price control, whether of supply or demand, of services or of goods; narrowly it is used to mean a combination of manufacturers or merchants to control the supply prices of commodities or servant".¹ In a previous chapter we have seen the various forms that such combinations take.

Since buyer's monopoly (or monopsony, as it is sometimes called) is very rare we shall give our main attention to seller's monopoly. To start with we shall assume conditions of perfect monopoly in which the seller has complete control of supply. In actual fact, however, perfect monopoly is as rare as perfect competition. In real life what exist are the varying degrees of competition, ranging from almost perfect monopoly on the one hand to almost perfect competition on the other. To grasp the essential principle of monopoly value, however, it is necessary to assume perfect monopoly, just as we assumed perfect competition to understand the essential principles of price under competition. In the next chapter we shall study intermediate cases, which are more typical of real life, of "imperfect competition" or "monopolistic competition" as their condition is variously called. First of all let us see how monopoly conditions arise.

2. **How Monopolies May Arise.** Monopoly may arise due to any of the following reasons :—

(i) *Legal causes.*—Legal ownership of a particular raw material may be in one or a few hands. Law may confer monopoly of producing a particular good or a service, e.g., patents and copyright articles, gas, electricity and water supply, postal services, etc., are of this kind.

(ii) *Natural causes.* Some regions or countries may be the sole or chief producers of a commodity, e.g., jute in India and Pakistan, diamonds in South Africa, nitrate in Chile. These countries have control over the major portion of the supply, hence have monopoly power in price determination.

(iii) *Economic causes.* Along these are combinations consciously formed by the producers of a commodity for the sake of restricting supply and realising monopoly profits. The various trusts and kartels studied in a previous chapter fall in this category.

1. Thomas op cit. p 217

Another economic cause is the necessity of large capital equipment for the production of a commodity. The largest producing unit secures the largest economies of scale and ends by eliminating competition.

If an industry yields important economies of large scale production, the total demand for its product may be less than the optimum output of a single firm; or a few firms of the optimum size may be able to supply the whole of the consumer's demand. In such a case unless government interferes, high prices and high profits may not attract other competitors. The potential rivals will realise that if they entered such a business they will not only reduce the existing normal profits, but the price may fall so low as to make it impossible to cover their costs of production, *e.g.*, electrical current supplied through capital outlay, railways requiring enormous capital.

3. Evolution of the Theory of Monopoly Value. It was admitted quite early in the history of economic thought, that situations could exist where the producer could charge prices above their costs of production by restricting the supply of a commodity. Cantillon and Adam Smith both recognized the possibility of price rising above or falling below production costs in the short period. Due to natural scarcity products could be sold above costs permanently. But Adam Smith thought the monopolist charged the maximum price that he could extract from the buyer, in contrast to the producer under competition who charged the minimum he could afford to charge. Adam Smith failed to take account of the elasticity of demand.

Ricardo paid little attention to monopoly except as regards the influence of scarcity in the case of non-reproducible goods and of rent which he regarded as monopoly price.

Senior paid some attention to monopoly, but did not elaborate his ideas in any detail.

J. S. Mill mentioned cases of abnormal profits by patentees and others.

Cournot, a French contemporary of the later English classical writers, however, showed a remarkable grasp of monopoly value. He showed by illustration how a monopolist fixed the price at a level where profit per unit multiplied by the number of units sold is at the maximum. Thus he paid adequate attention to elasticity of demand. He also anticipated some of the recent ideas regarding imperfect competition.

Marshall gave a comprehensive treatment of monopoly value and showed that the monopolist does not always try to obtain maximum net revenue. In some cases, according to him, the reason may be philanthropic but in others fear of State intervention or of substitutes or public opinion may stand in his way. When monopolies are publicly owned the authorities have to consider interests of consumers which are often the same as of the owners.

More recently, as we have seen, the emphasis is on imperfect competition rather than on pure monopoly.

The following is a simplified numerical illustration :—

Price Rs.	Units Demanded (Doz.)	Total Revenue (Rs.)	Marginal Revenue (Rs.)	Units supplied (Doz.)	Total cost (Rs.)	Average cost (Rs.)	Margi- nal cost (Rs.)
9	1	9	9	9	81	9	17
8	2	16	7	8	64	8	15
7	3	21	5	7	49	7	13
6	4	24	3	6	36	6	11
5	5	25	1	5	25	5	9
4	6	24	-1	4	16	4	7
3	7	21	-3	3	9	3	5
2	8	16	-5	2	4	2	3
1	9	9	-7	1	1	1	1

In the above table prices, units demanded and units supplied at each price are assumed, total cost is also assumed. The other figures are obtained as follows :—

(a) Total Revenue = Price \times units demanded.

(b) Marginal Revenue : total revenue for 1 unit is 9, total revenue for 2 units is 16, marginal revenue for 2 units is $16 - 9 = 7$ and so on.

(c) Average Cost : Total Cost \div unit supplied.

(d) Marginal cost : Total cost for 8 units is 64.

Total cost for 9 units is 81.

Marginal cost for 9 units is $81 - 64 = 17$.

If we assume that the unit of 1 dozen cannot be split then monopoly gain will be made largest if three units are produced and sold, since this is the output which makes marginal revenue and marginal cost equal. Thus :—

Units.	Total revenue.	Total cost	Net monopoly revenue. (Total revenue minus total cost.)
1	9	1	8
2	16	4	12
3	21	9	12
4	24	16	8
5	25	25	0
6	24	36	-12
7	21	49	-28
8	16	64	-48
9	9	81	-72

In the above illustration monopoly revenue is maximum for three units and also for two units. If the unit could be indefinitely divided this arithmetical inaccuracy could be eliminated. The most profitable output in fact, under the above conditions should be $2\frac{1}{2}$ units, i.e., between 2 and 3 units.

6. **Optimum Output Under Monopoly.** It is important to note that the *optimum output* (output giving maximum profit) is *smaller under monopoly than under competition*. We have already seen in an earlier chapter, that under perfect competition an individual producer is incapable of appreciably affecting price by varying the amount of his output. This is so because his output forms an insignificant proportion of the total supply. He, therefore, produces an amount for which his marginal cost equals to the price prevailing in the market. If his amount is less than this, he will gain by producing more, if it is more than this, he will benefit by producing less.

The case of the monopolist is different. When he increases his output, he has to lower his price to sell the additional output. It is thus not only the price of the additional output that falls but the price of his total output goes down. *Since his output affects the price at which he can sell, price is not a given factor for him as it is for the man producing under competition. He therefore cannot expand his output to the same degree as the producer under competition can.* He can only expand it profitably up to a point at which his marginal cost equals his marginal revenue. This point arrives earlier for the monopolist than it does for the man producing under competition. This is so because his additional output lowers the price of his total output while for the producer under competition the price remains unaffected. Hence the monopolist must stop expansion of his output at a point earlier than the producer under competition would do. The same reasoning applies when the producer is producing under imperfect competition.

The table on page 291 illustrates this point clearly. Here conditions of perfect and imperfect competition are compared. What is true of imperfect competition is true with greater force of monopoly.

The table shows that under perfect competition demand price [Col : (e)] remains constant, since increase in output of any individual firm does not affect price appreciably. Since demand price is constant marginal receipts (or marginal revenue) is also constant for the producer under competition. Output will expand up to a point where marginal cost is equal to the demand price, i.e., up to 11 units.

Under imperfect competition, as output expands demand price [Col : (h)] goes down, therefore marginal revenue also goes on decreasing until it becomes negative. In this case the producer must stop expansion at 7 units. If he produces more his marginal costs will exceed his marginal revenue. At 7 units they are approximately equal.

Notice that for the producer under competition marginal receipts (or marginal revenue) is the same thing as demand or market price. For the monopolist or the producer under imperfect competition they are not the same. For 7 units (optimum output) demand price is higher than the marginal cost.

VALUE UNDER MONOPOLY

Cost Conditions				Demand Conditions			
Assumed under identical Perfect and Imperfect Competition.				Perfect Competition			
(a) Units of output.	(b) Average Cost.	(c) Total cost.	(d) Marginal Cost.	(e) Demand price.	(f) Total receipt.	(g) Marg. revenue.	(h) Demand price.
							To. receipt.
							Marg. revenue.
1.	15 10 0	15 10 0	15 10 0	10 0 0	10 0 0	10 0 0	14 8 0
2.	14 8 0	29 0 0	13 6 0	10 0 0	20 0 0	10 0 0	14 0 0
3.	13 8 0	40 8 0	11 8 0	10 0 0	30 0 0	10 0 0	13 8 0
4.	12 10 0	50 8 0	10 0 0	10 0 0	40 0 0	10 0 0	13 8 0
5.	11 14 0	59 6 0	8 14 0	10 0 0	50 0 0	10 0 0	12 8 0
6.	11 4 0	67 8 0	8 2 0	10 0 0	60 0 0	10 0 0	12 0 0
7.	10 12 0	75 4 0	7 12 0	10 0 0	70 0 0	10 0 0	11 8 0
8.	10 6 0	83 0 0	7 12 0	10 0 0	80 0 0	10 0 0	11 0 0
9.	10 2 0	91 2 0	8 2 0	10 0 0	90 0 0	10 0 0	10 8 0
10.	10 0 0	100 0 0	8 14 0	10 0 0	100 0 0	10 0 0	10 0 0
11.	10 0 0	110 0 0	10 0 0	10 0 0	110 0 0	10 0 0	9 8 0
12.	10 2 0	121 8 0	11 8 0	10 0 0	120 0 0	10 0 0	9 0 0
13.	10 6 0	134 14 0	13 6 0	10 0 0	130 0 0	10 0 0	8 8 0
14.	10 12 0	150 8 0	15 10 0	10 0 0	140 0 0	10 0 0	8 0 0
15.	11 4 0	168 12 0	18 4 0	10 0 0	150 0 0	10 0 0	7 8 0
16.	11 14 0	190 0 0	21 4 0	10 0 0	160 0 0	10 0 0	7 0 0

7. Laws of Return, Elasticity of Demand and Monopoly Price.

We have seen in an earlier chapter that additional units of a commodity may be forthcoming at constant costs, increasing costs, or decreasing costs per unit. How far does this fact modify the theory of monopoly value? The principle of price determination remains fundamentally unchanged. The monopolist will in every case try to fix a price or produce an output which gives him the maximum monopoly revenue. In every case he will achieve this by pushing his output to a point where his marginal revenue equals his marginal costs. The Laws of Return, however, along with elasticity of demand will determine whether this will happen at a smaller or a larger output.

In each case, therefore, the monopolist will have to keep two factors in mind :

(a) How does his marginal cost behave with increasing output? i.e., which Law of Return is at work?

(b) How does the elasticity of demand of consumers of the commodity behave?

Thus :—

(i) If the article is being produced under the Law of Constant Return, the elasticity of demand will determine whether more or less should be produced, since cost per unit is constant. If the demand is very elastic (i.e., extend rapidly with a slight fall in price, and contracts quickly with a slight rise in price) then the monopolist will gain most by producing to the fullest of his capacity and lower his price. If the demand is inelastic it will be to his advantage to restrict supply and charge high prices.

(ii) If production follows the Law of Diminishing Return, it will pay the monopolist to restrict supply, and sell at a high price. The output will be smallest when the article produced under increasing costs (Diminishing Return) meets with very inelastic demand.

(iii) If the commodity is produced under Increasing Return, it will be to the advantage of the monopolist to produce a large output and sell it at a low price. His output will tend to be the largest when the article produced under decreasing costs (Increasing Return) meets with very elastic demand.

8. Theory of Monopoly Value Summed up. We thus come to the following conclusions regarding the determination of value under monopoly. These are also true for the cases of Imperfect Competition so far as they have an element of monopoly in them.

(a) As in perfect competition, price under monopoly is also determined by the interaction of demand and supply forces. But there is this difference, that the supply is under the control of the monopolist. He has two alternatives either (i) to fix the price and leave the quantity to be sold (or produced) to the demand of the consumers at that price or (ii) to fix the amount to be sold (or

produced) and leave the price to be determined by the forces of demand in relation to this supply. He cannot do both of these things.

(b) If the monopolist fixes a very low price he can sell a larger number of units than he would at a higher price. If he fixes a high price his receipts per unit will be high but he will sell fewer units. How demand will vary in response to variations in price will depend upon the elasticity of demand of the consumers of the commodity in question. In the case of inelastic demand he will fix a high price. But if the demand is elastic, a lower price will bring him the maximum monopoly revenue.

(c) It will be to the interest of the monopolist to aim at maximising his total monopoly revenue. He will, therefore, try to fix a price, which makes his net revenue per unit multiplied by the number of units sold, a maximum quantity.

(d) If the commodity in question costs him nothing, the monopolist will expand his sales up to a point where his marginal receipts become zero. This is so because every positive marginal receipt will add to his monopoly revenue, there being no costs to cover.

(e) If the production of the commodity involves costs of production then the monopolist will produce that quantity of output of which his marginal receipts are equal to his marginal cost of production. This will be so whichever law of production is at work in the production of the commodity concerned. The most profitable amount of output, however, will be smallest when the Law of Diminishing Return in production meets with a very inelastic demand. It will be largest when the Law of Increasing Return in production meets with a very elastic demand. In the former case a high price with a small output and in the latter case a low price with a large output will maximize monopoly revenue.

(f) Under perfect competition "marginal receipts" and selling price are the same since by selling more or less on the part of a seller under competition price remains unaffected. Under monopoly (and imperfect competition) since sale price falls with increased sales, at the optimum output (output giving maximum monopoly revenue) the marginal receipts or revenue will be lower than the selling price.

(g) Other things being equal the optimum output will be of a smaller amount for the producer under monopoly and imperfect competition than the one producing under perfect competition. This is so because under imperfect competition, production must stop earlier than the point at which marginal cost becomes equal to selling price. The producer under competition can push his sales until his marginal cost is made equal to the prevailing market price.

9. Price Discrimination. So far we have assumed that the monopolist charges only one price from all the purchasers of his

commodity. This is generally not the case. The monopolist can, and some monopolists do, charge different prices from different people, provided these people form "different markets" or belong to what are called non-competing groups. This is known as price discrimination.

Price discrimination may be (a) personal, (b) local or (c) according to trade or use. It is personal when different prices are charged from different persons usually according to their economic position. It is local when the price varies according to locality (e.g., dumping). Discrimination is according to use when different prices are charged according to uses to which the commodity is put, e.g., electric current is usually sold cheaper for industrial uses than for domestic purposes.

Discrimination is possible because of the variations in the intensities of demand for the same commodity. These enable the monopolist, if he has complete control of supply, to divide the demand into a series of markets according to its intensity. He can thus charge higher prices from those who can afford to pay higher prices and lower from those who are only able to pay lower prices. This can obviously happen only if the commodity cannot be transferred from the cheaper to the dearer market.

A few illustrations will make this point clear. In the case of certain books, the first edition is issued at a high price. Those whose marginal utility (intensity of demand) for the book is very high purchase it at this price. After this edition is exhausted a second edition is issued which is priced lower than the first. People of lower marginal utility also can now purchase the book. This process may be repeated several times and a very wide sale obtained. People with greater intensity of demand will not wait for cheaper editions. In this way the monopolist appropriates the major portion of the consumer's surplus and increases his monopoly revenue to a point otherwise not possible.

Other similar examples easily come to one's mind. A doctor charging fees according to a person's income, different classes of fares in the railways when the increase in comfort is not fully in proportion to the higher fares charged. Similar discrimination may be made in the case of goods according to the principle of "what the traffic will bear." Discrimination may be made between the home and the foreign markets. Certain English cigarettes, for instance, are priced lower for foreign markets like India. Certain books have cheaper "Overseas" editions, etc. Dumping also falls in the same category as we shall presently see.

In certain cases price discrimination may be to the advantage of a community for instance when a particular service may be very useful to the community. If the price is fixed low enough for the poorer classes production costs may not be met due to absence of normal profits per unit. If the price is fixed too high, the total receipts again may be low due to meagre sales. The commodity may

thus not be produced at all. If discriminatory prices are charged the total receipts may be adequate to meet the total cost with profit. Thus every one may gain by producing such a commodity when discriminatory prices are charged.

When discrimination takes the form of dumping it is regarded as an obnoxious practice.

10. Price Discrimination by Dumping. Dumping occurs when producers (usually monopolists) of one country sell their goods in another country at prices below those charged from the consumers in the country of origin. In some cases it may pay a monopolist to sell his commodity in the foreign market below his cost of production.

The monopolist may have several motives for dumping (a) to dispose of an overstock casually produced due to wrong judgment of demand, (b) to develop new trade connections by charging low prices, (c) to drive competitors out of the foreign market whether foreigners or native producers and (d) to reap economies of large scale production.

An extreme case of dumping may be illustrated as below :—

Home Market

<i>Sale price</i>	<i>Cost price.</i>	<i>No. of units</i>	<i>Net Revenue.</i>
Rs. as	Rs. as.		Rs. as.
10 0	5 0	100	500 0
9 12	4 12	150	750 0
9 4	4 8	200	950 0
8 8	4 4	250	1062 8
7 12	4 0	300	1125 0
7 0	3 12	350	1137 8
<hr/>			
5 12	3 4	400	1000 0
4 8	2 12	450	787 8

It will be seen that if the monopolist only produced for the home market he would produce 350 units and sell them at Rs. 7 a unit. This will give him the largest net revenue, i. e., Rs. 1,137-8-0.

Suppose he produced 450 units instead of 350. His total cost will be Rs. $450 \times 2\frac{2}{3} = \text{Rs. } 1,237/8/0$. For 350 units his total cost would have been Rs. $350 \times 3\frac{2}{3} = \text{Rs. } 1,312/8/-$.

Thus the monopolist can lower his total cost by Rs. 75 (Rs. $1,312\frac{1}{2} - \text{Rs. } 1,237\frac{1}{2}$) by producing 100 units more.

It will be to his advantage to produce these extra 100 units even if he has to destroy them. He can thus sell all these additional units in a foreign market with profits if he can charge a price just over the cost of transporting them. No foreign producer can compete with him at such a price.

Such a big advantage, however, is rare. We took an extreme case to illustrate the principle involved. Moreover, if the difference between the home price and the foreign price is greater than the cost of transporting the commodity back to the country of its origin, the commodity may be re-exported, unless high tariff walls stand in the way. Foreign countries usually raise high tariff walls against dumping especially if it affects their own industries.

11. Is Monopoly Price A High Price ? We have seen that monopoly power enables a monopolist to restrict his output and charge a price higher than his marginal cost of production. Competitive price tends to equal the marginal cost of production of the commodity concerned. This, however, does not mean that monopoly price is necessarily and invariably higher than competitive price. Several influences may keep monopoly price down and in some cases may bring it to a level lower than would be under competition.

The monopolist may be able to produce an article at a lower cost per unit on account of the exceptional advantages that he may enjoy as regards the scale of production, in advertising, marketing expenses and other overhead charges. Thus even though he may charge a price higher than his own marginal cost it may be lower than would be the marginal cost under competition. This is the case especially with industries using large and expensive indivisible equipment, and the demand for the products of which is elastic. Expansion of output in such industries reduces cost per unit and larger output can be sold at remunerative, though low prices.

Normally, however, monopoly price is rarely lower than price under competition. But this does not mean that monopoly price is inordinately high price. As we have seen, there are serious limitations on the powers of a monopolist. He is not always able to charge prices which would theoretically maximize his profit. Apart from the fact that the monopolist may be ignorant of the level of price which gives him maximum returns due to difficulties of assessing the factors involved, there are certain considerations which few monopolists can ignore. These we have already referred to in an earlier section and may be noted again—

(a) No monopoly is perfect. The fear of competitors in the same line or producers of substitutes has always a restraining influence. If monopoly price becomes excessively high, either consumers will take to substitutes or rivals will appear, somehow or the other, to exploit such a favourable field of activity. The American Sugar Refining Company, for instance, had to buy out competitors time and again, who came into the field due to abnormally high prices.

(b) The consumers' sovereignty cannot be ignored. Apart from the substitutes that may be available (e.g., coffee for tea) the consumer may entirely dispense with the particular kind of service. In other words the demand may be very elastic and the fear of its contraction may keep monopoly price down.

(c) The third consideration is the fear of State intervention. If the authorities think that the monopolist is unduly exploiting the public, they may intervene. In such cases the State may fix a maximum price or undertake to supply the service itself, *e.g.*, public utilities like electricity, gas and water supply.

(d) Buyers' monopoly is another restraining influence where it exists.

But in spite of these restraining influences monopoly prices are generally higher than competitive prices. Human nature being what it is, a monopolist cannot resist the temptation of charging higher prices when he can do so. He can reap economies of scale, he has not to incur heavy expenditure on publicity and advertisement, he is therefore in a position to charge less but he does not. Monopoly price thus need not be higher but it is.

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such a firm may not expand. Its expansion no doubt will result in lowering its marginal cost but it will also lower its price since its output appreciably affects price. It is quite possible that the loss incurred on account of lower price may more than balance the gain from the larger sales. The firm may thus have no incentive to expand. *Thus inefficient firms may continue to exist when competition is imperfect. All firms thus will not tend to be of the optimum size.* It will also be clear from the above that *under imperfect competition the number of firms in an industry may be larger than that under perfect competition. This is so because inefficient firms tend to be eliminated under perfect competition.* Under imperfect competition efficient firms may not be able to drive inefficient firms out of the market. Because to do this the efficient firms will have to lower their price considerably to overcome the prejudices of the customers of inefficient firms. This the former might not think worth while doing. A slight reduction in price under perfect competition, on the other hand, would, by attracting all the customers of the inefficient firms, drive them out.

Thus when competition is imperfect there may be a large number of firms each producing an output which is less than the optimum. Most of them may be earning more than normal profits. The monopoly here may consist only in the fact that each has a semi-independent market protected by transport costs, ignorance or goodwill of the buyers. Under such conditions it may be to the advantage of the community if the industry is concentrated in the hands of a smaller number of firms. By reducing their number each firm will become optimum with larger output and lower costs and price.

This brings us to the wastes of imperfect competition.

7. Wastes of Imperfect Competition. Some other evils, other than those noted under monopoly¹, are associated with imperfect competition. Superficially, these are sometimes considered "wastes of competition" but they can more fitly be described as "wastes of monopolistic conditions"² or of imperfect competition. These are mostly due to what are technically called irrational buyers' preferences, i.e., buyers' preference of a commodity or a shop due not to any real differences in quality but to irrational factors like habit, prejudices or ignorance. Some of these cases are given below.

(a) Expenditure on competitive advertisement is usually regarded as a waste of competition. In fact it is due not to perfect but imperfect competition. If competition is perfect there is no need for such expenditure to be incurred, because then each firm can extend its sales by lowering its price only a little. Under imperfect competition much larger reduction of price will be necessary to overcome the irrational preference of consumers. It pays, therefore, to spend money on advertising and thus persuading the consumers that the product of the advertising firm is better than that of its rivals. Such expenditure is a waste from the point of view of the community.

1. Chapter XXII, Sec. 13.

2. Nerde : Economic Analysis and Policy, pp. 165-168.

(b) Another similar waste is 'expenditure' on cross transport. A firm in the north of India may be selling a commodity to the consumers in the south. At the same time the same (or substantially the same) commodity is perhaps being sold by a firm located in the south to consumers living in the north. This state of affairs is also due to the absence of perfect competition, which in its turn is due to irrational buyers' preferences. If competition was perfect the firms in the north would have attracted all the buyers in the north, and the firm in the south all the buyers there, by a slight lowering of price. This would have saved the cost of the transport. As it is, the firms deem it worth while spending considerable sums on advertisement and transport cost, rather than reduce price adequate enough to attract the neighbouring consumers with irrational preferences.

(c) A third waste of imperfect competition is the failure of each firm in an industry to specialise in the production of those things for which it is best suited. Under perfect competition such a specialisation would naturally take place, provided it led to any real economies. Under conditions of imperfect competition, since each firm has to spend money on advertisement or to sell at considerably lower prices in order to attract customers from its rivals, "each firm may find that it pays it better to produce varied assortment of types and qualities to sell to its own particular customers, rather than to face the cost of attracting a large number of customers for one type of product alone."¹

(d) Still another waste of imperfect competition has already been noted. This is that under such conditions the efficient firm which can produce at lower cost may fail to drive out the inefficient firms as would happen if competition was perfect. If competition is perfect the efficient firm (or firms) will increase output until the price comes down to the marginal cost of production at which the inefficient firms will not be able to supply. But if competition is imperfect and the efficient firm has to spend considerable sums to attract consumers from inefficient rivals or it has to lower its price considerably to achieve the same end, it might prefer not to drive out the inefficient firms even though the latter were charging prices higher than the marginal cost of the efficient firm.

(e) Finally, imperfect competition may prevent that standardization of commodities which is essential if the most efficient methods of production are to be adopted. Different types of cars may be produced by a large number of firms each at a high cost of production. If only a few designs were produced cost per unit could be lowered considerably due to economies of large-scale production. Under perfect competition such large producing units would emerge. Under imperfect competition no producer would take the risk of producing any particular design on a large scale since the cost of attracting buyers from his rivals would outweigh the advantages of scale obtained by producing the larger output.

CHAPTER XXV

DISTRIBUTION : GENERAL PRINCIPLES

1. Introduction. By "Distribution" in the present context, we do not mean the distributive activities of traders and middle men by means of which goods pass from the factory to the wholesale and retail markets and then to the consumers. These activities are covered under production. The process of production, we have seen, does not end until the commodity is in the hands of the final consumers. "The economics of distribution," in the words of Chapman, "accounts for the sharing of the wealth produced by a community among the agents, or the owners of the agents, which have been active in its production."¹

In a primitive society the productive process is so simple that all the factors are supplied by one and the same individual. The question of distribution, therefore, does not arise, or at any rate does not require much explanation. But as production becomes complex and the various agents achieve specialisation, they have to be drawn from different sources and must be paid their due remuneration. It became also difficult to attribute any particular portion of the product to any particular factor. The problem becomes complicated and requires careful study.

2. Need for a Separate Theory. Marshall justifies the need for a separate theory of distribution on the ground that "free human beings are not brought up to their work on the same principles as a machine, a horse, or a slave." "If they were," he continues, "there would be a very little difference between the distribution and the exchange side of value, for every agent of production would reap a return adequate to cover its own expenses of production with wear and tear, etc., at all events after allowance had been made for casual failures to adjust supply to demand."² Actually, however, not only human beings but other factors of production, like land, are subject to peculiar conditions, especially as regards supply. We cannot for instance speak of the marginal cost of production of factors of production in the same sense as when we use this term in relation to ordinary commodities. Land, for example, is a gift of nature. Its total supply is fixed and once all the land has been brought under use, this supply cannot be increased, however attractive the reward for its services. It has no *cost of production* in the sense that, for instance, radio sets have. Capital can be increased, but its supply price does not depend upon its marginal cost of production in the same sense as does that of other commodities. As for labour what can be the marginal cost of production of a human being? Human

1. Sir Sidney Chapman : *Outlines of Political Economy*, p. 278.

2. Marshall : *Principles of Economics* ; 8th Ed. p. 504.

beings are not produced on business considerations. The same is true of enterprise.

The Theory of Value which explains the determination of the value of *commodities* is not applicable in its entirety to the determination of the value of *services*, i.e., in the determination of the share of the various agents of production out of the National Dividend. In two respects the two theories, viz., Theory of Value and Theory of Distribution, resemble : (1) On the demand side the value of both commodities and services is determined by marginal utility or marginal productivity; and (2) the immediate effect on value of a change in supply is also similar, viz., increase in supply will decrease its value and *vice versa*.

There are, however, important differences on the supply side, especially as regards the effect of price on supply. In the case of a commodity if the price goes up, supply tends to increase to take advantage of the prevailing high price. But this cannot happen in the case of an agent of production. If for example rent or wages go up the supply of land or labour, respectively, will not increase. Wages may rule high, it will not lead to increase in population just as the high price of wheat leads to increased production of wheat. Similarly, if the price of wheat falls less wheat will be produced, but if wages fall, it does not follow that less children will be produced. The fact is that changes in population are not governed by economic considerations. Thus the supply of an agent of production does not quickly react to the changes in its reward or remuneration. The supply of an agent cannot as readily be adjusted to the changes in demand as that of a commodity. Further, the cost of production of an agent of production cannot be ascertained. As a matter of fact it looks rather odd to speak of cost of production in the case of an agent of production, say labour. What can you say about the cost of production of a worker or an acre of land? Hence though in the case of a commodity, we may say that value in the long run tends to approximate to cost of production, yet such approximation is out of the question so far as an agent of production is concerned for the simple reason that the cost is not ascertainable. Thus those who supply services, rather than commodities, have no data to determine whether they are being only rewarded by the prevailing prices. The adjustment of supply of agents of production to fluctuations in demand for their services is a complicated affair and does not admit of an easy or exact analysis.

In spite of these qualifications the general theory of demand and supply does apply to agents of production. But since it requires essential modifications it is necessary to have a separate theory of distribution as distinct from the theory of value.

The conditions of supply of factors of production not only differ from those of ordinary commodities but also differ as between the factors themselves. It will be necessary, therefore, to study each of

them separately. We shall have to see how rent, wages, interest and profit as rewards, respectively, of land, labour, capital and enterprise, are determined. As far as the conditions of demand are concerned they can be explained in more or less similar terms, and a common theory can be applied to all the factors. That Theory—the Marginal Productivity Theory which is analogous to the Marginal Utility Theory of Value—we study in the present chapter.

We shall proceed as follows as far as this preliminary discussion is concerned: In the first place, we must get a clear idea of what actually is distributed, in other words what really is meant by the National Income or National Dividend. Secondly, we must explain the agencies through whom distribution takes place. Thirdly, we shall expound the general principles according to which the share of each factor is settled.

3. The National Dividend. National Dividend has been variously defined. "*National Dividend*," says Pigou,.... "*is that part of the objective income of the community, including of course income derived from abroad, which can be measured in money.*" Thus according to Pigou in estimating the national dividend only those goods and services should be included which are exchanged in the market. This definition would exclude the services that one renders to one's self, to members of one's family or friends without payment. Similarly, free benefits derived from public property like parks and toll-free bridges will also not be counted. This definition is a very narrow one. Moreover, it gives rise to paradoxes. One is mentioned by Pigou himself. If a man marries his housewife the national dividend is diminished! This is so because he has no longer to pay for her services though the same services are still being rendered.

Some writers define national dividend in terms of goods produced others in terms of goods consumed. "*The labour and capital of the country, acting on its natural resources, produce annually a certain net aggregate of commodities, material and immaterial, including services of all kinds.*" This Marshall calls the *National Income* or the *National Dividend*. The qualification 'net' is used to indicate that out of the total gross produce must be deducted a certain amount to provide for depreciation and wearing out of plant and other capital equipment, while the net income from foreign investment must be added.

According to Fisher, on the other hand, the true national income is that part of the annual net product which is directly consumed during the year. Fisher's definition is more logical but Marshall's is more convenient, since it is easy to measure goods and services produced during the year than to make a list of those actually consumed. As Marshall¹ points out depreciation is also consumption in the broad sense of the term. "And in this broad sense," he adds, "it is true that all production is for consumption, except under certain exceptional conditions. The estimate of the national dividend on

1. Marshall, op. cit p 524.

the basis of production is, therefore, roughly identical with that based on consumption.

4. Measurement of the National Dividend. As regards measurement of the national dividend three methods are usually suggested :

(a) The first method is called the *census of production method*. Estimate the value of all produce, industrial or agricultural, raised during the year. Make allowance for depreciation or replacement of the assets. How replacement is allowed may be illustrated by an example. Suppose at the beginning of the year a machine of the value of Rs.10,000 is employed and it is estimated to last ten years. Then at the end of the year its depreciation will be Rs.1,000. This must be deducted from its total product in order to arrive at its net product. Similarly, allowance will have to be made for the using up of circulating capital in the form of various raw materials and for the exhaustion of the soil, mines, etc.

(b) The second method consists in *adding together the incomes of persons* who pay income-tax and those who do not pay the tax.

(c) The third method is that of *occupational census*. This consists in estimating the earnings of all the persons employed in the different productive activities in the country.

While estimating incomes, rather money incomes, the value of gifts against which no services are rendered should be excluded. Similarly, should be excluded interest on the internal unproductive debt, old-age pensions, incomes earned by fraud, etc. Moreover, precautions should be taken against double counting, i. e., the same income may not be counted twice.

National dividend is a flow and not a fund. The national dividend thus derived is the source from which all the factors of production must receive their rewards. It is at once the source of remuneration for, and the result of the efforts of, the various agents of production.

It should, however, be noted that the *national dividend is not a fund ; it is a flow as Marshall puts it*. It is not first produced and accumulated and then distributed at the end of the year. Purchasing power is being distributed in the form of rent, interest, wages and profits, and as commodities and services flow out of the productive system they are constantly being purchased by the holders of the purchasing power in the market. Thus the national dividend is constantly being produced and consumed. At the end of the year there may be nothing in the way of the surplus to show. Capital may have been kept in tact and the rest may have all been consumed. The dividend, in that case, would be represented by all the utility enjoyed by the community during the year.

In the words of Marshall, the net aggregate of all commodities produced is itself the true source from which flow the demand prices

for all these commodities, and, therefore, for the agents of production used in making them. Or to put the same thing in another way, this national dividend is at once the aggregate net product of, and the sole source of payment for, all the agents of production within the country; it is divided up into earnings of labour, interest of capital, and lastly the producer's surplus, or rent, of land and of other differential advantages for production. It constitutes the whole of them, and the whole of it is distributed among them; and the larger it is, the larger, other things being equal, will be the share of each of them."¹

It should further be remembered that this division does not take place among the individuals as individuals, but as factors of production. The same individuals may represent all the four factors. An East Punjab peasant, for instance, may receive rent as owner of land, wage as labourer and profit as entrepreneur of his operations. Even when all the factors are supplied by the same individual, it is not difficult to determine their reward separately. The simplest method of working out their shares in each case is to find out what rent the peasant would have received if he had let his land out on rent and what wages he would have to pay if he had hired a labourer, etc.

5. The Agency of Distribution. It is obvious that the share each factor of production receives for its services is in a way its price. Who is then the buyer and who is the seller? The seller of course is the agent itself or its owner. As regards the buyer we have seen in a previous chapter that the agency which brings together the factors, i.e., land, labour and capital, is the entrepreneur who may be one individual or a collection of organized individuals like a joint-stock company. It is the entrepreneur who plans, initiates and bears the risks of the productive enterprise whether it be a farm, a factory, or a shop. He undertakes these enterprises, because he hopes to make profit. His profits depend upon the relation between two quantities, cost of production and price. Entrepreneur tends to move towards enterprises in which differences between these two quantities are expected to be high. They have to forecast movements of prices and have to estimate the costs of production of commodities they intend to produce. When they expect to make profits in a particular line they start new or expand old enterprises. This creates demand for the various factors of production. The entrepreneurs are, therefore, the buyers of services of the factors of production. They buy these services not for their own personal use but to supply the needs of the community. They thus act on behalf of the community. Ultimately it is the community that is the purchaser of the services of all the factors of production including that of the entrepreneur. As we shall see later, forces of competition decide the remuneration of the entrepreneur. He is the purchaser of the services of the other factors and

1. Marshall—Principles of Economics, 1936, p 536

it is through him that the shares to each of these are distributed in the form of wages, rent and interest.

6. The Principle of Substitution. The entrepreneur in employing the various factors of production acts according to the principle of substitution. We have already seen the working of this principle in consumption. There, a consumer distributes his money income over the various items of expenditure in such a way as to derive maximum satisfaction. This, we have seen, he achieves when the utility derived by him from the last unit of money spent on each head is equalised. In other words a consumer achieves maximum total utility by equalising his marginal utility from the various lines of consumption.

The entrepreneur acts in a similar way. The only difference is that he undertakes expenditure not for direct satisfaction of his wants but to make as high a profit as possible. His profit depends upon the difference between two quantities, his total expenses of production and his gross income from sales. Ultimately his expenses are the payment that he has to make for the various factors of production. For an individual entrepreneur acting under conditions of perfect competition the prices of the factors (rent, wages, interest) and the price of the product to the production of which they contributed are given facts settled by the market forces collectively. He can, therefore, maximise his net income only by achieving the best combination of the various factors employed by him. By employing a little more of labour or a little less of land or capital he will bring about the most advantageous combination from the point of view of productivity. Just as the total utility is maximum when marginal utility of each item of consumption to the consumer is the same, total productivity is maximum when the marginal productivity of each factor of production employed by the entrepreneur is the same. What is marginal productivity?

7. Marginal Productivity. By the marginal productivity of a factor of production we mean the addition made to total production by the employment of the marginal unit, i.e. the unit which the employer thinks just worth while employing. At the margin of employment the payment made to the factor concerned is just equal to the value of the addition made to the total production on account of the employment of the additional unit of the factor. Note that the additional production is not the contribution of the additional unit of the factor in the sense that this unit alone has produced it. Production is a collective process and results from the co-operation of all the factors employed. We cannot separate the contribution of each. We can only measure the *difference made* in total production by the employment of the additional unit of a particular factor assuming everything else to be the same. When this additional unit is just worth while employing (it adds to total revenue just as much as it costs) it is marginal unit. Its productivity is marginal productivity of the factor of production under consideration.

We have seen in consumption that an increase in the supply of a commodity, demand remaining the same, lowers its marginal utility and *vice versa*. In the same way an increase in the supply of a factor of production lowers its marginal productivity and *vice versa*. The fall in marginal productivity means that on account of larger supplies the factor is employed in those uses where its productivity is low. Similarly a rise in marginal productivity means that when the factor becomes more scarce than before it is withdrawn from those uses where its productivity is the least.

8. Marginal Productivity Theory of Distribution. Now we are in a position to state the Marginal Productivity Theory of Distribution which is analogous to the marginal utility theory of value already studied. *According to the marginal productivity theory the reward of each factor of production tends to equal its marginal productivity.* Factors of production tend to move from those uses in which their marginal productivity is low to those in which it is high. In this way a given supply of a factor of production is distributed in such a way that its marginal productivity is equal in all the uses. Take the case of a certain kind of labour. If all the labour units are perfectly interchangeable and can move fully from one employment to another, the given supply of labour will get distributed in such a way that its marginal productivity is the same in all the employments. If the marginal productivity of labour is higher in one employment than in another labour will move from the latter to the former employment. Larger supply in the former employment will lower its marginal productivity and smaller supply in the latter will raise its marginal productivity. This process will go on until its marginal productivity in both the employment is the same.

In each employment, on the other hand, the entrepreneurs are substituting factors of production against one another under the principle of substitution. The entrepreneurs tend to arrive at that particular combination which gives them maximum total productivity. This will happen when the marginal productivity of the various factors combined achieves equality. If for instance an entrepreneur thinks that the marginal productivity of labour to him is higher than that of capital, he will employ more labour and less capital. Marginal productivity of labour will fall and that of capital will rise. This process will go on until in equilibrium the two marginal productivities will be equalised.

It should be noted that for any individual employer working under competition the prices that he has to pay for the factor of production are already determined. Since his demand for the factors of production is only an insignificant proportion of the total demand, his employing more or less of the factors does not appreciably affect their prices. What he does is to push the use of each of the factors to such a point as to make its marginal productivity equal to its price as already determined by the market forces. His position is the same as that of the consumer who pushes his purchase

of a commodity to a point at which his marginal utility is just equal to the prevailing-market price. Just as the market price is determined not by the marginal utility of an individual consumer but by the marginal utility of the consumers in the aggregate, the price of a factor of production is determined by the marginal productivity not of any particular employer but of the employer in the aggregate.

Thus in a position of equilibrium : (i) The marginal productivity of a factor of production is the same in all employments. (ii) The marginal productivity of each factor of production is equal to every other factor of production in the same employment. (iii) The marginal productivity of a factor of production is measured by the price of the factor of production.

Over the whole field of employment, therefore, each factor of production tends to be paid in proportion to its marginal productivity. Thus the distribution of National Dividend is not a scramble as the strikes or lock-outs make it appear to be. It is governed by a definite economic principle.

9. Assumptions of the Marginal Productivity Theory. The Theory is true only under certain assumptions. *Firstly*, it assumes that all the units of a factor are homogeneous, so that any one unit is as good as any other. If the units are not homogeneous they will not be uniformly rewarded. The more efficient or effective unit in that case will command a higher reward. In fact non-homogeneous units cannot be regarded as belonging to the same factor.

Secondly, that different factors are capable of being substituted for one another, so that at the margin it is possible to use a little more land or a little more labour or capital, etc. If this substitution is not possible marginal productivity of the various factors may remain unequal. In that case total productivity will be less than the maximum.

Thirdly, it is also assumed that the amount of a particular factor that is used can be continuously varied. So it is possible to apply a little more or a little less of the same factor. If this cannot be done the use of the factor cannot be pushed to the point at which its marginal productivity becomes equal to its cost.

Fourthly, it is assumed that factors of production are mobile as between various uses. If a factor cannot be moved from one use or employment to another, its marginal productivity in the various employments may remain unequal.

Lastly, the theory is based on the law of diminishing returns as applied to the organization of a business. This means that other things being equal a disproportionate increase in the supply of any one factor increases total production at a diminishing rate.

Under these assumptions the theory explains the rewards of all the four factors of production, i.e., rent of land, interest of capital, wages of labour and profits of enterprise. The reward of each tends to

equal the value of its marginal net product. The rent of a plot of land (assuming all plots to be perfectly interchangeable) will be equal to the marginal productivity of that plot. The interest on capital will equal to its marginal net product, the wages of labour will measure the marginal net product of labour. In the same way competition will make the profits of the entrepreneur equal to the marginal productivity of his services to the community, *i.e.*, the amount that the community is able to produce with the help of a little more his services over and above what it could produce without this increment of his service.

10. Criticism of the Marginal Productivity Theory. Even within these assumptions the marginal productivity theory has not been uniformly accepted by economists. Several of its criticisms may be noted.

(i) One common criticism is that a product is the result of the co-operative effort of all the factors of production and that it is impossible to separate the share contributed by each. This criticism advanced by Taussig and Davenport is obviously based on a misreading of the concept of marginal productivity. As we have already explained, marginal productivity is not the net product solely due to the marginal factor. We merely impute that product to the factor on the margin of use. It is the net addition made to total production by the employment of this additional factor or deduction caused in it if this factor were withdrawn.

(ii) Another attack is made by Hobson. It is held that if any particular factor unit is withdrawn the whole business will be so disorganized that the loss to production will be much more than the productivity of the unit withdrawn. This criticism is also due to the wrong application of the theory. The attention is fixed on a small business organization and large units of factors. If we conceive of a large business and small units of factors it will be clear that withdrawing a unit at the margin will not appreciably affect the productivity of the other factors.

(iii) Then there is the opposite view according to which the sum of the marginal net products of all the factors will be less than the total product. The surplus being due not to any particular factor but their co-operation. Wicksteed has answered this criticism. He assumes that the increase of all the factors will increase the quantity of the product in the same proportion. But this assumption which implies that the industry obeys the Law of Constant Returns is not always valid and introduces certain difficulties.

(iv) Another serious difficulty which relates to the measurement of the marginal net product has been pointed out by Joan Robinson¹, Pigou² and J. A. R. Hicks³. It is argued that when there

1. *Economics of Imperfect Competition*, p. 327.

2. *Economics of Welfare*.

3. *The Theory of Wages*.

are economies of large scale production, the marginal productivity of a unit of a factor to a particular firm will be considerably less than that to the industry as a whole. This is so because when an additional unit is made available to an industry it brings about a greater division of labour. But when the industry has adjusted itself to the new supply it is quite possible that the marginal productivity of a factor to an individual firm is less than that to the industry as a whole, because its withdrawal will mean a much greater loss to the industry than to an individual firm. In such industries, therefore, marginal productivity of a factor is indeterminate.

(v) Hobson thinks that it is not possible to vary the use of factors in most cases. The proportion in which factors are used is determined by technical conditions of the business, the existence of fixed capital like machinery, etc. Many a machine for instance would require only one labourer, two would be uneconomical and so on. Since we cannot vary the use of a factor how can we determine its marginal productivity? To this it is replied that in general there are infinite possibilities of variations in the proportions in which different factors are combined. Such variations are the very conditions of progress in business organizations. Even fixed capital can be varied though not being replaced if long enough period is assumed.

(vi) Finally, it is objected that the theory assumes that supply is fixed. In actual practice the reward enjoyed by a factor does affect its supply in most cases. The theory only approaches the problem from the side of demand and ignores the forces of supply. In fact the theory does not ignore supply it assumes supply to be given for convenience of analysis. Supply tends to adjust to demand which is determined by marginal productivity. The demand for factors of production is ultimately derived from the demand for the products of the factors on the part of the consumers. Consumers' preferences are the ultimate determining forces to which the resources of the community must administer.

It should be remembered that the Theory is only valid under the assumption of perfect competition. In actual life, since competition is not perfect, actual rewards paid to factors of production do not conform to their relative marginal productivities. Moreover, this explanation of how the shares of the various factors of production are determined in a capitalistic economy should not be regarded as a justification from the ethical point of view of the system of distribution under such a system.

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CHAPTER XXVI.

RENT

1. **Introduction.** Let us now take each of the factors of production separately and make a detailed study of its peculiar problems. The present chapter will be devoted to the rent of land.

What is rent? In the ordinary speech the term rent is used in a wide sense to mean a hire charge, e.g., rent of a house, a tonga or a machine. But in Economics rent, or *economic rent*, as it is called, is used in a special sense. It refers to whole of the payment which a tenant makes to the landlord. It refers only to that part of the payment which is made for the use of land (i.e., free gifts of nature, *only* which has been brought under ownership). The usual payment that an agriculturist tenant makes to the landlord is not necessarily equal to this *economic rent*. A part of this payment may consist of interest on capital invested in the land by the owner in the form of buildings, fences, drainage arrangement, etc. Sometimes this rent may include wages of the agriculturist. This is the case in East Punjab in many instances. Land is very scarce relatively to the demand for it on the part of the tenants, who have no other openings for earning a living. In order to secure land, therefore, they are willing to pay more than the true economic rent of the land.

Economic rent is a surplus over costs. It is due to *natural differential advantages* possessed by a piece of land over the marginal land. This statement is explained below. How does economic rent arise? More than a century ago David Ricardo supplied an answer.

2. **Ricardian Theory of Rent.** Ricardo defined rent as follows :—

“Rent is that portion of the produce of the earth which is paid to the landlord for the use of the *original and indestructible powers* of the soil.” It is often, however, confounded with the interest of capital, and, in popular language, the term is applied to whatever is annually paid by a farmer to his landlord.”

Economic rent, according to Ricardo, is the *true surplus left* after the expenses of cultivation as represented by payments to labour, capital and enterprise, have been met.

How this surplus arises may be illustrated by an example. Suppose in a country there are four kinds of land A, B, C and D. Some pieces of land are more fertile than others; some areas are more advantageously situated as regards centres of population and means of transport, etc. But taking all the factors into consideration, let us suppose that we have four categories of land as mentioned above, so that land A is the most superior and B, C and D are 2nd.

3rd and 4th grade lands, respectively. Further, suppose that a standard unit of labour and capital, called a "dose" of labour and capital, when applied to these categories of land, produce wheat as given in the table below :—

Doses of labour and capital	Return in maunds of wheat per acre.			
	A	B	C	D
1st	15	14	13	12
2nd	14	13	12	11
3rd	13	12	11	10
4th	12	11	10	9
5th	11	10	9	8
6th	10	9	8	7

If there is enough land of class A, so that by putting one dose of labour and capital per acre into this land the whole of the demand for wheat can be met at the prevailing price of wheat, the land will command no rent. It will be like a free gift of nature.

Now suppose the population increases to such an extent that the whole of the A class land is brought under cultivation, and still wheat obtained by putting one unit of labour and capital into this land is not enough to meet the growing demand. More labour and capital will be put into lands of class A, and lands of class B will also be brought under cultivation. This will happen only when the price of wheat will rise so much as to make it worth while putting the second dose of labour and capital into lands A or first dose of labour and capital into lands B. In other words, in our chart above, 14 maunds of wheat must sell for as much as is the cost of a dose of labour and capital. On lands of class A, therefore, two doses of labour and capital will give a return of $15 + 14 = 29$ maunds of wheat. But only $14 \times 2 = 28$ maunds of wheat are enough to pay for the two doses. One maund of wheat is the surplus on land A. Cultivators of land can either cultivate B class lands free of rent and get 14 maunds of wheat per dose of labour and capital per acre, or they can pay one maund of wheat (or its equivalent in money at the prevailing price) per acre to the owners of land A as rent and obtain 14 maunds of wheat per dose of labour and capital as their share. If there is perfect competition this rent for A class lands is bound to be established.

As the demand for wheat still grows and the price rises this process will continue. More and more units of labour and capital will be applied to the superior lands on the one hand and still inferior lands will be brought under cultivation on the other. The

available 'doses' of labour and capital will be applied in such a way as to get equal returns at the margin of cultivation. For instance if there are 14 doses available 5 will be applied to land A, 4 to land B, 3 to C and 2 to land D. In this way the marginal or the last dose applied to each class of land will give the same return i.e., 11 maunds of wheat. The total production under these conditions will be $65+50+36+23=174$ maunds of wheat. No other arrangement will give more than this total. These doses will be applied only if the price of wheat is such as to make only 11 maunds of wheat enough to meet the cost of application of a dose of labour and capital.

Under such circumstances rent per acre of the various kinds of land will be as calculated below :

$$\begin{aligned}\text{Rent of A grade} &= (15+14+13+12+11) - (11 \times 5) \\ &= (\text{total produce}) - (\text{total cost}) \\ &= 65 - 55 = 10 \text{ maunds}\end{aligned}$$

$$\text{Rent of B grade} = 50 - 44 = 6 \quad ,,$$

$$\text{Rent of C grade} = 36 - 33 = 3 \quad ,,$$

$$\text{Rent of D grade} = 23 - 22 = 1 \quad ,,$$

We have calculated the rent in terms of the produce. It can be easily converted into its money value at the prevailing price of the produce.

Marginal or no-rent land. When the marginal produce is 11 maunds all the four types of land in our illustration pay rent. When it is 12 maunds, land D pays no rent. It is then the marginal land or land on the margin of cultivation. This is also called the "no-rent land." It produces no surplus over cost of production. Its produce is just enough to cover the expenses of production on it. The rent of all superior lands are measured upwards from and with reference to this land.

Does marginal or no-rent land really exist? One would think that such a land cannot exist. Every body will be keen on having such a land so that the owner will be in a position to demand some rent for it. But this is a superficial view. No-rent land does really exist. The whole of the payment as rent may be due to investment of capital, i.e. interest. The land itself may be such as not to yield any surplus at all. For example there may be some waste land lying useless and nobody may be willing to pay anything for its use. But a prospective tenant may agree to pay something if the owner sinks a well there. Obviously the payment is for capital invested in sinking the well and not for the land, which is really a no-rent land. Sometimes the existence of no rent land is concealed in a big form where the rent takes the form of so much money per acre. But there are very good acres and very bad acres. The latter if let out alone may fetch nothing. Or the rent paid may not be economic rent but scarcity rent. This happens in an old country with growing

population. Even the marginal land pays some rent which is scarcity rent. The superior lands will pay besides scarcity rent, economic rent due to the natural differential advantages enjoyed by them. Finally, the marginal land with regard to an old country like England may exist in Australia or Canada supplying the same market.

3. Scarcity Rent. The Ricardian Theory assumes, as has been explained above, that no-rent land does exist either in the same country in some other country with which the former has trade relations. Some people have elaborated the Ricardian Theory by adding the concept of scarcity rent when all lands in a country pay rent. To refer to our illustration again, when the marginal productivity of labour and capital falls below 12 maunds of wheat, the worst land D also begins to pay rent. This is due to the scarcity of land. If there was a still worse land available in the country that would become the marginal land. As it is there is no worse land than D grade land. In that case as the price of wheat rises D land is also subjected to intensive cultivation and yields a surplus over cost. This surplus is not a differential one compared to no-rent land which does not exist. It is due to scarcity of land as such. Hence it is called scarcity rent.

The rent yielded by lands superior to D lands thus contains two elements : a differential surplus over the marginal land and a payment due to scarcity of land as such. For instance in our illustrations, if cultivation is carried to a point when D pays 2 maunds of wheat as rent the superior lands will pay a scarcity rent of 2 maunds in addition to the differential rent. Thus A land will pay a total rent of 15 maunds of which 2 maunds will be scarcity rent and 13 maunds differential rent.

4. Criticism of the Ricardian Theory. The Ricardian theory of rent has been widely criticised. First, it has been pointed out that there are no 'original and indestructible powers of the soil.' Good lands after being constantly cultivated lose their fertility to a large extent and get exhausted. To this it may be replied that if after exhaustion good lands are manured equally with the bad the former regain their productive power much more readily than the latter. It is also pointed out that in an old country where land has been constantly manured, the upper layer which grows crops is all man-made. There is nothing original about it. But climate, sunshine, air, situation, etc., of a particular piece of land are all fixed by nature. They are all 'original and indestructible.'

Secondly, it is objected that Ricardo uses the term fertility of land in a vague manner. Apart from the factor of situation fertility depends upon the ability of the farmers and the methods of production used. Moreover, fertility is relative to crops grown. The theory, however, assumes that the methods of production remain constant. They are standardised into 'doses' of labour and capital.

Thirdly, Ricardo's theory assumes that there exists a no-rent land which only repays the cost of cultivation. In most cases, it is true, there are lands which pay only a nominal rent. Such lands yield no true economic rent. The concept of scarcity rent can also meet this difficulty. For the substance of the theory, however, it is not necessary that there should exist a no-rent land.

Fourthly, according to Ricardian Theory rent arises on account of natural differential advantages of superior lands over the marginal one. But even if all the land is A grade rent will arise due to the operation of the law of diminishing returns. The marginal unit of labour and capital applied must be compensated by the product. The earlier units will give surpluses over their cost which will constitute the rent.

Fifthly, as Carey and Roscher point out, it is historically wrong to assume that in a new country the best lands are cultivated first. In fact lands that are first cultivated are not usually the best since they are the most easily accessible. To this Walker has made a reply that by best land Ricardo meant not the most fertile land but land which is the best both from the point of view of fertility and situation.

Sixthly, criticism is levelled against Ricardo's corollary that since the marginal land pays no rent and merely meets the cost of production rent does not form a part of the price of the produce. It is explained below that in some cases rent does enter into price.

Finally, the most important criticism of Ricardo, however, comes from those who deny 'the necessity of explaining rent by a special theory, not applicable to the rewards of other factors of production.' They explain rent in the same way as wages, interest and profits. They deny its peculiar nature as contended by Ricardo. This point of view is explained below.

5. Modern Theory of Rent. In the Ricardian theory two facts stand out prominently: (a) that rent arises because some lands are superior and others inferior; and (b) that rent is measured from the no-rent margin.

Modern writers question both of these contentions. In the first place they assert that it is a matter of indifference to the general principle of rent whether the land is uniformly good, uniformly bad or gradable. The essential factor of rent is the relative scarcity of the products that land can yield. The scarcity of land is in fact derived from the scarcity of its products. If the problem is approached from this point of view the necessity of assuming different grades of land disappears. The 'differential principle' only explains why one particular acre of land *commands a higher rent* than a less fertile one. It does not explain *why rent arises*. Fundamentally speaking rent is paid because the produce of the land is scarce in relation to its demand. In the face of this scarcity rent will arise even if all the land in a country is exactly alike. The same is the case with wages,

interest and profit. These payments arise because the products of the factors concerned are scarce in relation to the demand for them. Just as a superior labourer gets higher wages and a superior entrepreneur earns higher profits over the inferior ones, superior land will command a higher rent. "Fundamentally, all that the Ricardian theory of rent amounts to is the truism that the better article will always command the higher price. A more fertile acre will be worth more than a less fertile one simply because they are different things. The same truism applies to wages."¹ Wicksell has pointed out that rent and wages are almost parallel cases.

Thus there is no justification for placing rent in a special category. Land commands rent according to its marginal productivity just as labour commands wages or as capital commands interest.

The second point of attack is the idea of the no-rent-margin. This is the starting point of measuring rent according to the Ricardian theory. It is contended by modern writers that the no-rent margin may exist in some cases, but it is not fundamental to the emergence of rent. For instance, some lands may be fit only for a specific use like growing corn. If it is not profitable to grow corn on them due to a fall in the price of corn, such lands may go out of cultivation or they may just pay for the cost of the crop grown on them. Such lands may have significance from the point of view of rent, but in a different sense than held by Ricardo. If such lands are cultivated they tend to increase the supply of corn and thus lower rents and if they go out of cultivation, due to fall in the supply of corn, rents rise. The existence of such marginal lands does not give any ultimate explanation of rent.

But when we do not refer to any particular crop, especially in a fully developed country, there is probably no land that cannot be put to some profitable use. Thus the margin of cultivation may vary according to the use to which a particular land is put.

It is concluded, therefore, that the theory of no-rent margin and a series of differential rents created upon it, while true in particular cases, is a partial not an ultimate, explanation of the phenomenon of rent. It does not reach the foundation of the problem. The real approach to rent as to other phenomena of value is through the principle of scarcity as propounded in the marginal productivity theory.

6. Rent and Price. The modern theory of rent deviates from the Ricardian theory in another respect too. Ricardo held that rent did not enter into the cost of production of the produce and hence did not affect its price. Rent rises because of the rise in price and not the other way round. This conclusion follows as a corollary from the Ricardian theory. We have seen that according to this theory rent is a surplus over cost. Price is determined by the cost of pro-

1. Briggs and Jordan, *op. cit.* p. 355.

duction at the margin where there is no rent. Hence rent does not enter into price. The marginal dose of labour and capital just pay for itself. In fact the position of the margin, according to the Ricardian theory, is determined by price and not price by the position of the margin. Price is thus not a part of rent.

It is true that differential aspect of land is not a cause of price. If land A does more valuable service than land B the extra payment obtained by land A would not affect price of the produce. In fact here we are considering two different things each being paid according to its efficiency or marginal productivity. There can be a similar differential aspect of wages and we can argue that such differential payments do not affect the price of the product of labour. But wages do enter price.

In another sense also it may be argued that rent does not form a part of price. Land is a free gift of nature. A higher remuneration given for the services of land does not increase its supply. Once all the land has been utilised, its supply is not affected whether rents are higher, lower or non-existent. Since land cannot be reproduced it has no real cost of production in the sense that other factors of production have. No payment is, therefore, necessary to maintain the total supply of land. In this sense rent is not a part of the supply price of land and consequently of the products of land.

But when we are thinking not of all the land of the country but of the land available for particular uses rent does form an element of price. This is clear from the conception of the opportunity cost. Most of the land is capable of being put to alternative uses. If it is put to one use it cannot be available for another use. The cost of putting land to one use is represented by the loss undergone in not putting it to the next best use. To withdraw it from one use for the sake of another, therefore, some payment has to be made. This payment must compensate the loss involved in this transfer. This payment will enter into the price of the product for the sake of which the land has been transferred.

The problem may be approached in another way. Prices are determined by the scarcity of the product in relation to demand. The rent that an entrepreneur pays is a part of his cost of production. If the rent is high the entrepreneur will tend to hire less land and conversely he will use more land if rent is low. If he uses more land the supply of land for other purposes is depleted, if he uses less land the supply available for other purposes is increased. Thus rent by influencing relative scarcity of land for different uses affects the prices of different products.

In the last analysis, however, as Davenport points out, rent neither determines price nor is determined by price. Both price and rent are governed by the relative scarcities of the products of land. They both vary with the changes in this relative scarcity. The same principle applies to wages, interest and profits.

7. Urban Ground Rents. So far we were dealing only with agricultural land. The phenomenon of rent also exists with respect to urban sites. Here also there is a differential aspect of rent and a scarcity aspect. Differential rent arises because of the differences in situations of different sites. Fertility here has little significance. Situational advantages may be of various kinds according to the use to be made of the plot. For instance, nearness to important business centres, fashionable quarters, nearness to main thoroughfares, or a railway station, may give situational advantages. Some sites may be just worth using, yielding no surplus due to advantages of situation. These may be regarded as marginal sites.

But marginal sites may also yield a rent due to their scarcity in relation to demand for them or due to the fact that they could be put to some other use like cultivation of crops, for gardening, etc. Better situated sites will yield both a differential rent and the scarcity rent. The differential rent will be measured upwards from the rent yielded by marginal sites. But here again it may be repeated that differential rent is not the ultimate explanation of the phenomenon of rent as such. High rents in fashionable quarters of a town, for instance, are due to an absolute scarcity of land on the one hand, and on the other to the relative scarcity of land with respect to any particular use, because of the competing demands of other uses. For instance suppose there is a site in a fashionable quarter of a town occupied by a large private house. The ground rent of this site is partly an absolute scarcity rent because the demand for such houses is greatly in excess of supply. Partly this rent is due to relative scarcity if this land has other competing demands. For instance competing demands may arise for using this plot for building a shop, hotel or office. A rent equal to the most valuable of these competing uses will represent the payment that must be made to retain the plot for residential purposes.

A site may be built upwards instead of spreading outwards. Here also differential rents may arise for the more conveniently situated accommodation. Higher storeys will involve inconveniences but these inconveniences may be less than those of a new ground site. Such buildings may lower general level of rents in a locality by reducing the scarcity of land.

8: Rent of Mines, Quarries and Fisheries. The same principles of rent apply to mines, quarries and fisheries. But there is one difference. Mines and quarries differ from agricultural land in that they are sooner or later exhausted. The payments made by the lease-holder for mines and quarries, therefore, contain two elements. One is a royalty for exhaustion of the contents and the other rent proper. Here also one may introduce the idea of the marginal mine (or quarry) and conceive of rent of better mines as a differential surplus over the rent of the mine at the margin. The marginal mine yields no surplus over cost of excavation of the mineral. The

be increased in response to increase in demand. That is why their earnings are exceptionally high. The basis of distinction between rent and quasi-rent is the fact that while the supply of land as the free gift of nature is fixed, that of the other instruments of production like building, machinery, etc., can be increased by man. Take the case of houses. During the recent war the demand for houses in towns increased due to increase in urban population. But supply could not be increased because of the scarcity of building materials. For the time being their supply was as much limited as that of land is. Rent rose in spite of State control. This abnormal increase in the return for capital invested in buildings is quasi-rent. It is not pure rent because the supply of houses can be increased. When the house rents become exceptionally high, old and dilapidated houses would be speedily repaired and together with deserted houses will come to be inhabited. In a way thus margin has descended. It is just like economic rent. Price (house rent here) determines the margin and margin determines the rent of superior and better houses. Rent does not determine price. This surplus is only temporary and will last as long as new houses are not constructed to meet this additional demand. With the increase in the supply of houses, as building materials become available, this surplus will tend to disappear. A similar surplus may arise in the case of other durable goods like machines, ships, etc. Similarly quasi-rent may arise due to a temporary scarcity of a particular kind of skill which can be increased if enough time is given. A doctor's earnings may contain such an element, so may a musician's or an actor's.

A business man must be compensated for capital he has invested in durable goods like machines and other appliances. The earnings from such durable goods must, in the long run, equal the prevailing rate of interest. If they are less, investment in such goods will be discouraged, their supply will decrease and earnings will go up. If, on the other hand, their earnings are higher, then production of such goods will be stimulated and their earnings must fall. But this will happen only in the long run. Temporarily, however, they may yield surplus earnings which are called quasi-rent.

Quasi-rent, however, should be distinguished from interest. The term interest is applied to return on free or floating capital, i. e., capital which can be easily diverted from one use to another to take advantage of the higher rate of earnings prevailing in certain lines. Quasi-rent is the return from specialised or sunk capital, i. e., from old investments of capital.

It should always be remembered that the distinction between rent and quasi-rent and in fact the returns to any other factor of production is only a matter of degree. In the words of Marshall, "that which is rightly regarded as interest on 'free' or 'floating' capital, or on new investments of capital, is more properly treated as a sort of rent—a Quasi-rent—on old investments of capital. And there is

situation. Distant lands will become nearer the market as it were. Their rents will rise. The rents of more favourably situated lands will fall. This can also be explained in terms of scarcity. If improved transport increases scarcity (by leading to exports from the given region) rents will rise, in the contrary circumstances rent will fall.

As to the growth of population, its result is to raise rents. According to the Ricardian theory this will be due to more intensive cultivation of old lands and extension of cultivation to inferior lands, thus leading to a fall of the margin of cultivation. According to the more recent way of putting it, increase in population will increase the relative scarcity of land in relation to the demand for its products and hence raise rents.

12. Can the Theory of Rent be Applied to Profits, Wages and Interest ? The rent element, i.e., surplus, is not peculiar to land only but it can be traced in other agents of production too.

(1) *There is Rent Element in Profits.* All entrepreneurs are not of uniform organising ability. At one extreme there are those who are just able to keep their heads above water. Their profits are the minimum. But at the other extreme are those who, on account of their superior organising ability, are able to produce at lower cost. They enjoy higher profits which are similar to surplus enjoyed by superior lands due to natural differential advantages they possess over the marginal land. Corresponding to situational advantage possessed by land certain entrepreneurs make larger profits on account of accident of birth or business influence. There is thus rent element in profits. Profits have been called by some economists as rent of ability.

(2) *Rent Element in Wages.* Just as some lands are superior to others, similarly some workers are superior to others. All workers are not alike. Some workers possess superior physique, are mentally more alert and show a greater sense of responsibility in the discharge of their duties. Thus varying degrees of efficiency are to be found among the workers. Roughly speaking wages correspond to personal efficiency. The more efficient workers enjoy a surplus or extra wage as compared with a marginal worker. Some employees earn more on account of family influence or some other favourable circumstances and this is analogous to rent of more accessible lands.

(3) *Rent Element in Interest.* The prevailing rate of interest compensates the marginal investor, i.e., one who is just induced to save. But there are others who are prepared to save even at lower rates either because they are very rich or because their expenses are less. Such super-marginal investors enjoy a surplus (rent element). This corresponds to rent in the extensive form. But there is rent element in interest corresponding to intensive form too. All units of saving earn the same interest but the last units saved involve greater sacrifice. At the margin the sacrifice involved is just compensated by the rate of interest. This means that the rate of interest more

are thriving and expanding. In the former case, *i. e.*, when an industry is contracting, the factor-units must seek employment elsewhere. They must transfer themselves elsewhere. In the latter case, *i. e.*, when an industry is expanding, the factors of production tend to move into such an industry. This is again a case of transfer. In both cases it is the lure of better earnings that induces the transfer. When a factor-unit shifts into the most favourable position as regards earnings, then the amount it makes is known as transfer earnings. In Benham's words, "The amount of money which any particular unit could earn in its best paid alternative use is sometimes called its transfer earnings."

The concept of transfer earnings has a close bearing on the theory of economic rent. Suppose a land devoted to the cultivation of cotton earns a little more than when it is devoted to the growing of sugarcane. If the profit in cotton cultivation falls a little or that in cane cultivation rises a little, the cotton land will be converted into cane land. Thus fluctuations in prices of different crops may make the cultivation of one crop more profitable than that of another. There will then be a tendency for the land to be transferred from one use to another in search for higher earnings. If an agent is earning more than what it would earn when transferred to the best paid alternative, the surplus is rent. In Benham's words, "In general the excess of what any unit gets over its transfer earnings is of the nature of rent." In case there is a piece of land that is specific for the cultivation of cotton, *i. e.*, it can grow nothing else, then its transfer earnings is zero. The whole of the cotton yield of such a land then may be regarded as rent.

The concept of transfer earnings also shows how costs may vary with the changes in output. An expanding industry must draw upon other industries for additional supply of the factors of production that it may need. In case these factors are already enjoying a higher standard of earnings, this industry must pay them still more, otherwise those factors will not be attracted to this particular industry. In these circumstances, the additional output is obtained at a very high cost, at any rate in the short period. The average and marginal costs per unit will increase, simply because transfer earnings of the factors are higher.

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CHAPTER XXVII

WAGES

1. **Introduction.** Labour is the second factor of production and its remuneration is called wages. The term wages may be used in a wide sense or a narrow sense. In the wide sense it means payments made for the services of labour. By labour is meant the various kinds of personal services. For instance, an employer may be earning wages of management if he is his own manager. An independent worker may be regarded as his own employee and may thus earn wages for his labour.

Some writers use the term wages in a restricted sense. "A wage may be defined," says Benham, "as a sum of money paid under contract by an employer to a worker for services rendered." In this sense, only a small proportion of workers in India are wage earners.

We shall use the term wages in the wide sense as the share of the national dividend which goes to those who work with their hands or brains, whether independently or for an employer. We shall, however, explain the principles that determine wages primarily with reference to wages of the employees. But the explanation of wages in a given occupation will also explain the earnings of independent workers in that occupation. It should be noted, however, that wages of independent workers fluctuate more over time than those of employees of others. This is due to the obvious reason that independent workers themselves have to bear the risks of the business, while the employers bear such risks in the case of the employees.

2. **Classification of Wages.** Wages may be classified from several points of view :—

(1) From the point of view of the class of persons concerned they may be 'salaries', 'pay', 'fees', or just wages. Salaries are paid monthly or yearly and are remunerations earned by highly paid persons like managers, engineers, etc. 'Pay' refers to the wages of middle class professional employers and are usually paid by the month. Fees are charged by independent professionals on the basis of service done, e.g., fee of a doctor or a lawyer, etc. Payment made to ordinary employees, skilled or unskilled, is just 'wages'. These may be paid by the month, the week or the day or according to the work done, i.e., by the piece. This brings us to the second classification into time wages, and piece wages.

(2) From the point of view of the manner of payment wages may be either time wages or piece wages. For instance a professor gets his regular salary on the basis of time, i.e., monthly, but his examination fees are on the basis of work done, i.e., papers set or

answer-books examined. Usually where work can be standardised and measured easily, payment is made by piece and where this is not possible, by time.

(3) On the basis of the form in which wages are received they may be called nominal or real wages. Nominal wages are wages in terms of money, while real wages are total satisfactions accruing to the worker. The welfare of the worker depends upon his real wages and not merely money wages. More of this presently.

(4) Sometimes wages are referred to as general wages and relative wages. By general wages here we do not mean any general rate of wages. There is in fact no 'general rate' of wages in a country, though when most of the wages rise and fall we may refer to the rise and fall of general wages. General wages refer to the share of the national dividend claimed by labour as such against the other factors of production. The theory of general wages explains the principles that govern this share as against the share falling to capital, land and enterprise. When we speak of relative wages, we refer to wages in relation to different employments and to different persons in the same employment. In the theory of relative wages we explain the causes of differences in earnings of different persons in the same employment and of persons in different employments or occupations.

3. Methods of Wage Payment. Wages may be paid according to the work done or according to the period of time the worker has been employed. The former is called 'piece wages' and the latter 'time wages'. Both methods of payment have their respective merits and demerits.

When work can be easily standardised or measured, payment by the piece is preferred by the employer. Similar is the case where the employer desires a large output. The workers on the whole prefer time wages. They complain that the employer tends to reduce the rates if the workers succeed in earning high rates by the piece.

When the work is such that it cannot be easily standardised or inspected and quality is more important than quantity time wages are preferred, e.g., payments for managerial and other executive services.

In practice, however, these methods are not exclusive. Under the time wage system a certain production is expected and when wages are paid by the piece some sort of a time limit has to be observed. When a standard amount of work is to be done within a specified time the system is known as task work.

Sometimes a minimum time wage is fixed and it is supplemented by a piece wage according to the amount of goods produced. Sometimes a premium wage is paid to a group of workers collectively for extra work done. This amount the workers distribute among themselves according to arrangements mutually agreed upon.

Wages may also be fixed on a sliding scale system, making them vary according to prices of the products cost of living or profits. Some employers enter into a profit-sharing arrangement with their labourers to get their full co-operation and sympathy.

In some cases wages are regulated by law. A minimum wage may be fixed in certain exceptionally low paid employments, etc., (sweated trades). Some people suggest a national minimum wage, applying to all industries.

We shall consider these systems at a later stage.

4. Nominal Versus Real Wages. Nominal wages as already explained, are wages paid or received in terms of money. But money wages alone may not give us a correct idea of the economic position of a worker. In order to find real wages, which determine the standard of living of a person, the following factors must be taken into consideration.

(a) *The purchasing power of money.* When comparing wages from place to place and from time to time the changes in the purchasing power of money must be taken into account. Part of the high wages in England and America may be due to higher prices prevailing in those countries. A hundred rupees in a village may give a much more comfortable life than a similar amount in a town or vice versa according to circumstances and tastes of the persons involved. A hundred rupees in 1938 had much greater purchasing power than in 1948. Even an increase of money wages thus may leave real wages at a lower level in 1948 as compared with 1938.

(b) *Subsidiary earnings.* In addition to the regular money wage an employee may earn other things in the form of money or goods. For example, board and lodging in the case of domestic servants, as in the case of peons, examination fees in the case of professors, etc. Subsidiary earnings may also be due to opportunities of employment available to other members of the worker's family.

(c) *Extra work without extra payment.* If an employee is required to do extra work without any compensation his real wages are decreased to that extent. Bank clerks are paid for their general duty during working hours, but quite often they are required to work late hours just to discover a mistake in accounts. For such extra work they are paid nothing.

(d) *Regularity or Irregularity of the employment.* Regular or more secure employments may give lower money wages, but the real wages may be higher than irregular and insecure employments, which give high money wages, e.g., a person whose employment is intermittent while earning Rs. 5 a day may not be so well off as another who earns regularly Rs. 2 a day.

(e) *Conditions of work.* Some occupations are healthier than others, in some hours of work are shorter than in others, work may be more pleasant or less pleasant, the employer may be more

agreeable or less, etc. All these things should be taken into account.

5. The Problems of Wages. The main problems that we have to study in connection with the determination of wages are :

(1) What are the general principles according to which the share of labour in the national dividend is determined. The various explanations given in this connection are known as theories of wages. The Marginal Productivity Theory of wages is now generally accepted. But we must examine some of the older theories, which are no longer regarded as adequate explanations of wage determination, but contain important elements of truth which must be brought out. Among these theories we shall consider : (i) The Iron Law, or the Subsistence Theory of Wages, (ii) The Wage Fund Theory of Wages. The Marginal Productivity Theory will then be explained and discussed.

(2) The second problem of wages is that of relative wages. Here we must explain the causes of difference in wages in relation to different persons in the same employment, different employments, different times and different localities, etc.

6. The Subsistence Theory of Wages. This theory originated from the Physiocratic School of French Economists and was commonly accepted during the 19th century. The German economist Lassalle called it the Iron Law of Wages or the Brazen Law of Wages. Karl Marx made it the basis of his theory of exploitation.

According to this theory wages tend to settle at the level just sufficient to maintain the worker and his family at minimum subsistence. If for some reason wages rise above this level workers are encouraged to marry earlier, their numbers increase by higher birth rate until the greater supply of labour brings wages down to the subsistence level. If wages fall below this level, marriages and births are discouraged, undernourishment increases the death rate and ultimately labour supply is decreased, until wages rise again to the subsistence level.

The French economists came to these conclusions, by observing the poverty of the French peasantry in the 18th Century. The German Socialists mistakenly thought that Ricardo had come to the same conclusion due to the intense misery of the working classes in England at the beginning of the 19th Century. Actually Ricardo believed that wages could rise beyond the subsistence level.

The theory, however, is applicable to backward countries like India and China, where labourers are extremely poor and are unable to get their due from the better placed capitalist or landlord. In such cases the landlord (or capitalist) is able to appropriate whole of the surplus over mere necessities of life just enough to let the labourer and his family carry on their work.

The theory does not apply to more advanced countries like England, America and others. The theory evidently, is based on

Malthusian Law of Population. It is wrong to say that every increase in wages must inevitably be followed by an increase in birth rate. An increase in wages may be followed by a higher standard of living both in agricultural and industrial countries. In Denmark and Holland, for instance, agricultural labourers receive wages above the mere subsistence point. In industrial countries of Europe and America wages have been steadily rising and the working classes are much more prosperous now than they were a century ago. Another criticism of the theory is that the subsistence level is more or less uniform for all working classes with certain exceptions. The theory thus does not explain differences of wages in different employments. Finally, it may be said that the theory explains wages only with reference to supply, the demand side is entirely ignored. On the demand side the employer has to consider the work which the employee gives him and not the subsistence of the employee.

7. Wage Fund Theory. This theory is associated with the name of J. S. Mill. "Wages," wrote Mill, "depend upon the demand and supply of labour, or, as it is often expressed, on the proportion between population and capital. By population is here meant the number only of the labouring classes, or rather of those who work for hire, and by capital, only circulating capital, and not even the whole of that, but the part which is expended on the direct purchase of labour."

According to this theory, therefore, wages depend upon two quantities—(i) the wage fund or the circulating capital set aside for the purchase of labour and (ii) the number of labourers seeking employment. Wages, therefore, cannot rise unless either the wage fund increases or the number of workers decreases. But since the theory takes the wage fund as fixed, wages could only rise by the reduction in the number of workers. Moreover, the wages of one kind of labour can be increased only at the expense of another kind. It would appear, therefore, that according to this theory the efforts of trade unions to raise wages are futile from the point of view of the labouring class as a whole. If they succeed in raising wages in one trade it can only be at the expense of another, since the wage fund is fixed and trade unions have no control over population.

The theory has been widely criticised and stands rejected now. Mill himself recanted it in the second edition of his principles. The main objections are given below :—

(1) Mill thought that wages are paid out of circulating capital alone. Now whether the source of wages is capital or the present products has been the subject of acute controversy in the past. English economists from Ricardo to Mill thought that wages were paid out of capital. Later English and American economists of the period from 1880 to 1914 thought that wages were paid out of the present products. Actually neither of these views is entirely correct. In some cases where the process of production is short (e.g., final stages of the productive process) wages are paid out of the present

production. On the other hand, when any process of production is long the labourer obviously does not obtain wages from the product of his labour either directly or through exchange. In such cases wages mainly come out of capital.

(2) Mill argued that wages were paid out of a certain fixed proportion of capital set aside for this purpose. This is also not true. There is no fixed wage fund in this sense. The fund, if we can at all call it so, is elastic. Its volume changes according to the prospects of profits. The productivity of labour at a given time is an important factor in determining these prospects.

(3) The theory is a mere truism. Without telling us about the sources of the wages fund and the method by which it is estimated, it simply tells us what is self-evident namely that the wage can be ascertained by dividing the wages fund by the number of workers.

(4) It assumes a degree of antagonism between labour and capital that does not exist. According to the theory wages can only increase at the expense of profits. But this is not necessarily the case. In times of business prosperity both wages and profits can go up.

(5) It is also wrong to assume that forcing up of the wages will drive capital abroad—capital is not so sensitive nor are the profits so inelastic. Returns on capital fluctuate from time to time.

(6) The wages fund theory does not help us to understand why wages differ in different occupations.

(7) The wage rates prevalent in different countries do not correspond to the total amount of capital available there. In new countries capital is scarce and the wages are high, opposite is the case in the old countries.

8. Residual Claimant Theory. This theory has been advanced by the American economist, Walker. According to him wages are the residue left over after the other factors of production have been paid. Rent, profit and interest, Walker thinks, are determined by definite laws. There is no similar law operating as regards wages. Out of the total production, therefore, after rent, interest and profit have been paid the remainder is wages. If on account of the greater productivity of labour the national dividend is increased wages also will increase. The theory thus allows the possibility of increase in wages through greater efficiency of labour.

This theory also has been rejected by most economists. It has several defects. In the first place it does not explain how trade unions are able to raise wages. Secondly, it ignores the influence of supply of labour on wages; thirdly, one fails to understand why the same law of supply and demand that explains the remuneration of other factors of production should not be applied to wages as well. Finally, the residual claimant is not the worker but the entrepreneur.

9. Marginal Productivity Theory of Wages: The marginal productivity theory takes into consideration both the supply of and

demand for labour. According to this theory wages are determined by the equilibrium between the forces of supply and demand. At any particular time supply is more or less given, demand plays the more important part. Over long periods, supply of labour can be increased or decreased and the forces controlling supply also become important, but these also act by influencing marginal productivity. Therefore the theory is called the marginal productivity theory.

Just as there is a demand price for commodities, there is a demand price for labour. The demand for labour under typical circumstances of a modern country comes from the employer who employs labour and other factors of production for making profits out of his business. The demand price of labour, therefore, is the wages that an employer is willing to pay for that particular kind of labour. To simplify matters let us suppose that all labour is of the same grade, i.e., one labourer is as good as another. Suppose an employer wants to engage such labour. How much wage will he offer? Let him employ labourers one after the other, just as a consumer consumes units of a commodity one after the other. After a point the law of Diminishing Returns will come into operation, when every additional labourer employed will add to the total net production at a decreasing rate. In other words with the increase in supply the marginal productivity of labour will fall. Up to what point will the employer go on engaging additional units of labour? Obviously up to the point where he thinks worth while to employ the last unit. He will naturally stop employing the additional labourers at the point at which the cost of employing a labourer just equals (in fact it is a little less than) the addition made by him to the value of the total net product. Thus the wages that he will pay to such a labourer (the marginal unit of labour) will be equal to the value of this additional product or marginal productivity. But since by our assumption all the labourers are of the same grade, what is paid to the marginal labourer will be paid to all the labourers.

In fact for any particular employer working under competition wages are already settled by the market forces. He cannot influence wages appreciably by employing more or less of labour. He is in fact in the same position as an individual consumer purchasing under competition. The individual employer like the individual consumer hires as many labourers as will equate their marginal productivity of labour to the prevailing rates of wages. It is the demand of all the employers taken in the aggregate in relation to the given supply that determines the marginal productivity of labour as a whole and the rate of wages in the market.

10. The Influence of Supply. When we explain wages from the side of demand we assume supply to be fixed. Similarly we can assume demand to be fixed and say that when supply of labour increases its marginal productivity falls, and conversely, when supply decreases marginal productivity rises. In the former case wages will fall, in the latter they will rise. When we say that the marginal

productivity of labour has fallen we mean that labour is put now to uses in which its net contributions to production at the margin are lower; and conversely in the case of a rise in marginal productivity its net contributions at the margin are higher.

The supply of labour may be influenced by various factors. The supply of labour as a whole depends upon the growth of population the problems of which we have already considered. The supply of labour in a particular employment can be increased at the expense of other employments if the marginal productivity of labour and hence wages in such employments rise. A given supply of labour under conditions of perfect competition gets distributed in various employments in such a way as to make the marginal productivity of labour in all the employments the same. But if labour cannot move from one employment to another freely, marginal productivity will be different in different employments and wages will be different even for the same kind of labour. This is, however, the problem of relative wages which we shall consider later.

The supply of labour may be decreased by labourers refusing to work for a time. This happens when labour is organised into trade unions. The labourers may not accept wages offered by the employer if such wages do not pay for their habitual standard of living. But as we shall see, it is only when higher wages are justified by higher marginal productivity that they will be paid. Thus labourers with low marginal productivity cannot demand high wages merely on the basis of their standard of living. In the long run, however, marginal productivity wages and standard of living tend to adjust with each other.

11. Wages and the Standard of Living. Late in the 19th Century a modified form of subsistence theory was propounded by some writers. They contended that the wages tend to conform not to the level of mere subsistence but to that of the standard of living of the class of workers concerned, to which such workers have become habituated. There is some truth in this modified form of the theory because the standard of living does influence wages in several ways: *First*, workers as far as possible will refuse to accept wages below their established standard of living and by withholding the supply of labour will compel the employer to accede to their demand. *Secondly*, higher standard of living by increasing efficiency of workers may increase their marginal productivity and hence wages. *Thirdly*, the standard of living may influence wages by setting limit to the increase of population. If the wages do not cover the established standard of living of the workers they will abstain from marriage or producing children. This will reduce the supply of labour, increase its marginal productivity and raise wages.

It should be noted, however, that standard of living depends as much on wages as wages depend upon standard of living. Mere insisting upon a higher standard of living, however, will not raise

wages unless the marginal productivity of labour justifies higher wages.

12. **Taussig's Theory of Wages.** The American economist Taussig gives a modified version of the Marginal Productivity Theory of Wages. According to him wages stand for the *marginal discounted product* of labour. He believes that you cannot arrive at a specific marginal product of labour, i.e., there is no specific product you may ascribe either to labour or to capital. Production is the result of a joint effort on the part of the various factors of production. Taussig conceives of the marginal product of labour as the joint product of labour, past as well as the present, determined at the margin of cultivation where there is no rent. Capital he regards as past labour and enterprise also as a form of labour. The land at the margin gives no rent. Thus the increase made by labour to total production at the margin of cultivation (labour including past labour as well) is the marginal productivity of labour.

But the labourer cannot get the full amount of the marginal output thus conceived. This is because production involves time and the final product of labour cannot be obtained immediately. But the labourers have to be supported in the meantime. This is done by the capitalist employer. But the employer does not pay the full amount of the expected marginal product of labour. He deducts a certain percentage from the final output to compensate him for the risk he takes by making the advance. This deduction, according to Taussig, is made at the current rate of interest. Wages thus equal the total product of labour on marginal land *minus* the amount discounted as explained above.

Two weaknesses of this theory have been recognized by Taussig himself. *First*, it is "a dim and abstract one, remote from the problems of real life." To this he replies that this weakness is common to all economic generalisations. *Secondly*, a more serious objection is that the joint product is discounted at the current rate of interest. But according to his own analysis the rate of interest is a result of the process of advance to the labourers, because it depends on the excess of what the labourers produce in the future over what is advanced to them in the present. This would be reasoning in a circle. To meet this difficulty Taussig suggests that we determine the rate of interest independently of marginal productivity by the rate of time preference and with the interest thus determined discount the marginal product of labour. This, however, hardly solves the difficulty, it merely evades it.

Taussig's theory ultimately analysed is a version of the Residual Claimant Theory of Wages. He says in fact that wages are what is left after rent, interest and profits are deducted from the total output. As such the theory is open to all the objections considered in connection with the Residual Claimant Theory.

13. **Limitations of the Marginal Productivity Theory.** We have already studied in detail the various limitations and criticisms of the Marginal Productivity Theory as a general principle of distri-

dition. With reference to its application to wages we may repeat that the theory is true only under certain assumptions, like perfect competition, perfect mobility of labour from employment to employment, homogeneous character of all labour, constant rates of interest and rent and given prices of the product. It is a static theory. The actual world is dynamic. All the factors assumed to be constant in fact are constantly changing. Competition is never perfect, mobility of labour is restricted for various reasons, all labour is not of the same grade, remuneration to other factors of production do not remain constant and the prices of the products of labour vary. All these changes modify the theory when applied to actual conditions. The theory, however, as an assertion of a tendency is true and is valuable in understanding the basic forces that determine wage rates.

In the actual world, due to the absence of the above assumption, there is not one rate of wages applicable to all labour. Wages differ from place to place, person to person and employment to employment. The reasons for these differences relate to differences in efficiency natural or acquired and other elements of economic friction which we shall consider under relative wages. In the matter of bargaining the employers are in a much stronger position and they do not feel compelled to pay the wage he can and he ought. The workers too do not seek the best market on account of ignorance and reluctance to leave hearth and home. Hence the prevailing rate of wage is generally less than that warranted by marginal productivity. It is also difficult to measure productivity, whether in terms of product or value.

14. Modern Theory of Wages. The modern theory of wages applies to labour the fundamental principles according to which values in general are determined. Corresponding to market value and normal value of things, respectively, we have wages at any given moment and wages in the long run: "Wages at any moment are determined by the marginal productivity of labour to the entrepreneur, while normal wages (i.e., wages in the long run) must be sufficient to cover the standard of life of the workers in the grade concerned. In the long run, the level of wages tends to that point at which the marginal productivity of the worker is equal to the supply price of the worker as determined by his standard of life."

Really there are two limits within which the actual wage will lie. The upper limit is fixed by the employer according to marginal productivity of the worker. The employer cannot afford to pay more than this, otherwise he will lose. This limit may be called the *economic wage*. On the side of the worker also, there is a limit below which he will not accept a wage permanently; temporarily he may. This limit is determined by his standard of life. In the long run the wage must enable him to maintain this standard. This may be called the *social wage*. Between these limits the wage will

be settled somewhere according to the relative bargaining strength of the parties.

15. Wages and Efficiency. There is a close relation between wages and efficiency. Greater efficiency leads to greater productivity of labour. This enables him to get higher wages. High wages in their turn enable a labourer to maintain a higher standard of living. Higher standard of living implies better food, clothing and housing, better opportunities for training and recreation, etc. All these things in their turn tend to increase productive efficiency of the labourer and his offsprings, and enables them to earn higher wages. Conversely, low wages by keeping the standard of living low lead to low productivity and lower earning power. Thus a vicious circle may be created, to get out of which becomes more and more difficult for the people concerned. It is in this way that poor countries tend to become poorer and rich countries richer. The circle of poverty can be broken only by conscious planning on the part of an enlightened State. Mere raising of wages, however, does not automatically raise productive efficiency. It may increase senseless expenditure without raising the standard of living.

When, however, higher wages are paid in response to greater productive efficiency, such high wages are no burden on industry. Thus high wages do not always mean high cost of labour. In fact low wages may be cheap labour provided higher efficiency more than counterbalances higher wages. For instance, if wages in America for a mill-hand are four times those in India, while productivity of labour is more than four times, American labour will be cheap and labour dear in spite of higher wages in America compared with India. This is the 'principle of the economy of high wages.' While nominal cost of labour in America will be higher, real cost will be lower than in India.

16. Wages and Inventions. How are wages influenced by inventions? The answer will depend upon whether the new inventions result in economising labour or capital. If an invention results in the economy of labour thus reducing demand for it, its marginal productivity will fall and wages will tend to fall. If on the other hand, an invention reduces the demand for capital, capital relatively to labour will become superfluous. Its marginal productivity will fall relatively to that of labour. Wages then may not fall and may even rise. In practice, however, few inventions economise either labour or capital alone. But most of them economise more labour than capital. They thus tend to lower wages in the short period but not necessarily in the long period. In the long period wages may be increased due to the increase in the national dividend brought about by the new inventions. The national dividend is bound to increase because inventions decrease the quantity of resources required to produce a given output. In this way means of production are released for use in other fields.

Distinction, however, should be made whether the increased share of labour in the national dividend is relative or absolute. It

is quite possible that the new inventions may increase wages only in the absolute sense while relatively to the share of capital the share of labour may go down even in the long run.

17. Wages and Unemployment. Inventions affect wages by acting on the demand for labour, the existence of unemployment may affect wages through supply. Since unemployment means reserve supply or potential supply of labour one would expect that existence of unemployment would tend to depress wages. But this is true only under certain conditions as has been pointed out by Dr. Hicks. Wages may rise in the face of unemployment. This is so because unemployment is of two kinds. The one kind is that was faced by almost all countries of the world during the world depression. Such unemployment undoubtedly lowers wages. But unemployment may exist in the sense of a large number of people who for various reasons physical, mental, or moral do not or cannot offer themselves for work. Such people are unemployable and form quite a fair proportion of the population of almost every country. Their number in India is quite large. Such people do not form a part of the normal supply of labour though some of them may be employed in times of exceptional scarcity of labour. Their existence does not tend to lower wages of normal workers. Such people normally remain unemployed because they are not worth the marginal wage paid by the industry.

18. Influence of Custom or Standard Rates on Wages Custom plays a much smaller part in the fixing of wages now than it used to in older times. In India, however, the influence of custom, in the villages is still appreciable. As regards the remuneration of professions, custom plays still an important part even in advanced countries. Lawyers and medical doctors' fees are cases in point. But even here competition manages to play its part, though it is not fully operative. Lawyers compete with lawyers and doctors with doctors at the standard fees. The competition depends upon differences of efficiency rather than on price cutting, so far as standard rates are effective. Even in industry standard rates do operate to some extent. It is difficult to arrive at the correct marginal productivity of a manager. The rates paid are usually customary or standard rates approximating to efficiency only in a rough way. Even wages though more carefully and accurately determined tend to become standardised and do not reflect accurately the differences in productivity. In practical life it is impossible to calculate as accurately as the theory demands. Adjustments are only rough and grave mistakes may be made even by the most careful employer. Moreover decisions are not made on pure economic grounds. Personal feelings of the manager or the foreman may intervene or the general state of trade may modify economic considerations. In slack times, for instance, a man may be kept on a job on account of philanthropic motives though he does not earn his wages in the economic sense. All these considerations limit the application of the theory to practice.

19. Why Wages Rise or Fall? The wage rate is determined by the interaction of the forces of demand for labour and supply of labour. Demand for labour is in the last resort derived from demand for the goods they produce; and supply of labour depends on the changes in population either through natural increase or through migration. Any change on the demand side or supply side or both is likely to bring about a corresponding change in the wage rate.

Broadly speaking wages will rise under the following circumstances:—

- (i) Decrease in the working population either by deaths or by emigration.
- (ii) Improvement in the efficiency of the workers.
- (iii) Economic development of the country, i.e., development of agriculture, trade and industry. Marked and rapid economic development creates more demand for labour and increases the national dividend which is the source of remuneration for the agents of production.
- (iv) More scientific exploitation of the natural resources having the same effect as above.
- (v) Formation of strong trade unions.
- (vi) Improvement in efficiency of the employers, or increase in their number creating a keen competition for labour.
- (vii) War.

Conversely, the wages may fall in the following circumstances:—

- (i) Increase in population;
- (ii) Economic depression;
- (iii) Impairing of labour efficiency through ill-health, starvation, bad housing, congestion, etc.
- (iv) Destruction of national assets by war.

20. The Problem of Relative Wages. So far we were concerned with general wages. We have examined the general principles which decide the share of the national dividend going to labour as against that going to the other factors of production.

The problem of relative wages is different. Here we have to explain the causes of differences in wages in different employments, or occupations, or grades of employments and also between different persons in the same employment or grade.

While discussing general wages we ignored these differences and talked of labour as such against capital, etc., as such and their remuneration. We assumed all labour to be of the same standard. In real life, labour is not of the same standard or the same grade. There are different grades into which labour in a country may be classified. In each grade there are different employments. Each employment has its own problem of wages. But the general principle of wage

fixation is the same. Wages everywhere tend to approximate the marginal productivity of labour. But the marginal productivity of labour will be different in different employments and grades in accordance with the degree of scarcity of each kind of labour in relation to the demand for it, or ultimately in relation to the demand for the products of each kind of labour. This is so because the demand for labour is a derived demand from the demand for the products of labour.

If there was free mobility of labour over the whole field of employment, real wage would tend to be in proportion to the relative efficiency of labour engaged in each kind of work. Real wages (not nominal wages) of workers of the same level of efficiency would tend to be the same. If workers in one employment were getting real wages more than in proportion to their efficiency labour would tend to move to that employment until increased supply would bring down its marginal productivity and wages. An opposite movement would take place if an employment paid lower wages than justified by the relative efficiency of labour.

In the actual world labour cannot move freely from employment to employment, especially in different grades. Different grades tend to become "non-competing groups."

21. Non-competing Groups. While discussing general wages we assumed, as just noted, that all labour belonged to the same grade. In actual fact the working population of a country may conveniently be divided into the following strata or groups. Each group is more or less exclusive.

(a) The lowest group is the unskilled labourers who lack special skill and special training. Most of the heavy manual work is done by these people.

(b) Above them are the semi-skilled workers who possess some skill and bear some responsibility, though they do not need much training.

(c) The third group is constituted by skilled workmen including clerical workers and salesmen. Carpenters, electricians, etc., belong to this group.

(d) Then there is the middle class consisting of ordinary business men and professionals.

(e) The highest class is constituted by successful professionals and business men, entrepreneurs, engineers, etc.

There are different employments in each of these grades and different wages may be earned by persons in different employments or even in the same employment. Each grade has a different level of earnings. What are the causes of these differences?

In India among other reasons, non-competing groups are created by the caste system. In other countries differences of opportunities for education and training available to different classes of people lead

to such non-competing groups. Supply under such conditions cannot adjust itself to demand.

22. Causes of Differences in Relative Wages. We may now summarise the causes which create differences in wages in different employments, professions and localities.

(i) *Differences in efficiency.* These may be due to different in-born qualities, education, training and conditions under which work is performed.

(ii) *Existence of non-competing groups.* As explained above, these arise because of the difficulties in the way of mobility of labour from lower paid to higher paid employment. These difficulties may be due to geographical reason, or social or economic reasons. Examples, respectively, are lack of transport facilities, existence of family ties or caste barriers and lack of means for better training, etc.

(iii) *The difficulty of learning a trade.* The number of those who can master difficult trades will be small. Their supply will be less than demand and their wages will be higher.

(iv) *Differences in agreeableness of employment.* Disagreeable employments must pay higher wages to attract labourers. If, however, disagreeable work can be performed by unskilled workers who cannot do anything better (due to caste or other incapacities) wages may be quite low, e.g., sweepers in India.

(v) *Future Prospects.* If an occupation gives hopes of future promotion people will accept a lower start in it, as against another occupation offering higher initial rewards but no chances of rise in the future.

It should be noted again that all these factors create differences in wages by affecting the adjustment of supply of labour to demand in the case of various employments and grades. Wages are in every case determined by the degree of scarcity in relation to demand for labour or by the marginal productivity of labour with respect to each kind of work.

23. Low Wages of Women. In most cases women are paid lower wages for doing the same kind of work. There are various reasons for this. In the first place it is due to long habit and custom. Until comparatively recently woman was regarded as a drudge even in the advanced countries of today. Even today women tend to crowd into occupations involving drudgery and depress wages there.

Secondly, since women do not make their work a life career they do not equip themselves with proper education and training. Their aim normally is to get married and after marriage most of them cease to earn independently and depend on their husbands.

Thirdly, for the same reasons, women do not organize themselves into trade unions to enforce higher wages for themselves.

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Their employment being only a stop-gap between school and marriage they do not give much attention to this matter.

Fourthly, women workers are prepared to accept lower earnings because they have very limited obligations and responsibilities. In most cases they do not depend merely on their own earnings, even when they are in employment. Husband, brother, father, may and do give them financial support.

Finally, men workers are much more reliable for continuous efficient work than women workers due to various reasons. Men are physically strong and can undertake more strenuous work and can bear much greater nervous strain. Moreover a woman on account of biological reasons is partly or wholly incapacitated for full work during certain periods of her life.

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CHAPTER XXVIII

SOME PROBLEMS OF LABOUR

1. **Introduction.** In the previous chapter we were concerned with the general principles that determine the share of labour in the national dividend. But these principles do not always operate freely. Competition is never perfect on both sides. The employer has certain advantages over the employee as we shall see. The employees therefore have to help themselves by organisation and militant action. The balance is also redressed by the action of the State through legislation fixing minimum wages and introducing various schemes of social insurance. In this chapter we propose to study the problems arising out of such self-help and State help accruing to the labouring classes. We begin with trade unions, the workers' organs of self-help.

2. **Trade Unions or Organisations of Labour.** "A trade union," in the words of Webbs, "is a continuous association of wage earners for the purpose of maintaining or improving the conditions of their employment."

Why are trade unions necessary? We have already seen that the wage earner, standing isolated, is in a very weak bargaining position vis-a-vis his employer. This is due to certain peculiarities of labour. Labour is the most perishable of commodities. It has no reserve power. A day's labour withheld is lost for ever while the labourer whether he earns or not has to be fed and otherwise maintained. The labourer therefore either must work or starve. Moreover, there is another reason why an employer is in a better bargaining position. "For it must be remembered," says Marshall, "that a man who employs a thousand others is in himself an absolutely rigid combination to the extent of one thousand units among buyers in the labour market." Due to this weakness in bargaining the labourers are likely to get wages much lower than their marginal productivity. Lower wages in this way have cumulative effect. Lower wages may reduce efficiency and hence the marginal productivity of labour.

It was therefore found by the labouring classes, early in the industrial advancement of the various countries, that unless they improved their bargaining position through forming trade unions they were in danger of serious exploitation by the employing class.

Trade unions in modern industrial countries are militant organisations fighting for the rights of the workers. Their aim is to ensure adequate wages, better conditions of work and more recently to secure some share in the control of industry. By creating a fund of their own through subscriptions of members, trade unions give financial help to labourers in the form of sickness and accident benefits, support them during unemployment and during strikes and lock-outs arising out of industrial disputes.

3. Trade Union and Wages. The question of wages has been and still is the main concern of trade unions. The labour leaders always believe that trade unions, by improving the bargaining power of labour could raise wages. On the other hand, the classical economists argued that wages could be raised only at the expense of profits and a fall in profits by decontinuing industrial activity would reduce demand for labour. Thus either wages must be reduced or unemployment must be faced. Trade unions according to this view could not raise wages permanently. It is also pointed out that wages are determined by marginal productivity and the unions can have no influence in the matter.

Trade unions, however, can raise wages mainly in two ways :—

(i) Trade unions can ensure that labour is paid to the full value of its marginal productivity. Under perfect competition no doubt wages tend to equal the marginal productivity of labour. But competition in the actual world is rarely perfect. Hence wages do not come up to the marginal productivity level if the bargaining power of labour is weak. By improving the bargaining power of labour trade unions can thus raise wages up to the marginal productivity level.

(ii) Trade unions can raise wages in another way too. They can improve the marginal productivity of labour. Trade unions can raise the marginal productivity of labour in three ways :—

(a) By forcing the inefficient employer to use more up-to-date appliances and organisation. It should be remembered that the marginal productivity of labour, among other things, depends upon the population in which labour is combined with capital and other resources. (b) By improving the efficiency of labour itself. This may be done by fostering habits of sobriety, thrift and honesty and by helping the younger generation to acquire better education and training. (c) Trade unions may increase the marginal productivity of particular group of labourers by restricting its supply. But this policy will succeed only under certain conditions. These conditions are : (1) The demand for that group of labour must be inelastic, which means that the demand for the commodity which the group helps produce must be inelastic; (2) the wages of the said group must form a small proportion of the total cost of production of the commodity concerned; and (3) the other factors of production must be "squeezeable". In other words, they should not be easily transferable to other uses. In the long run, however, there is a danger that the employers may adopt substitutes in the way of labour-saving appliances and demand for labour may fall off, thus bringing down wages. Trade unions can raise wages if they are all-inclusive and it is difficult to import black-legs.

4. Merits and Demerits of Trade Unions. While on the one hand trade unions have proved a boon to the workers, they have not escaped criticism. The trade unions have proved beneficial in the following ways :—

(i) A strong trade union is a guarantee of industrial peace and

makes for stability of the industry. Any decision agreed upon collectively by the workers is bound to command obedience of and respect among the general body of workers.

(ii) By insisting on standard rates of wages, they have helped in weeding out inefficient employers.

(iii) By their mutual-help functions they have considerably improved the efficiency of the workers. The levelling up of wages has gone a long way in eradicating squalor and poverty from among the masses of workers.

(iv) The rise in labour costs consequent on the increase of wages has given a fillip to the introduction of labour-saving machinery. It has resulted in great technical advance.

On the other hand, the trade unions have been subjected to severe criticisms particularly due to some of their anti-social activities. The following are some of the charges levelled against them:—

(i) By undue insistence on the payment of standard rates of wages, they have only levelled down the earnings of superior workers.

(ii) They have adopted a hostile attitude towards rationalisation or improved methods of production lest some workers should have to go out of work. This attitude has retarded technical progress and reduced national dividend.

(iii) They often advocate a go-slow policy which ultimately recoils on labour by reducing the national dividend and the volume of employment. This exposes the 'work-fund' fallacy.

(iv) Intoxicated with their strength, the unions have sometimes launched strikes on flimsy grounds and done incalculable harm to themselves, the producers and the community generally.

(v) They create artificial scarcity of labour by demanding that only union personnel should be employed.

On the whole the unions have supplied a felt want and filled an important gap. It can easily be seen that in their absence the workers would have been ruthlessly exploited. If the masses suffer, does the nation gain?

5. Industrial Disputes. Industrial disputes between labour and capital have become more or less a natural phenomenon of industrial life in capitalist countries. Such disputes either lead to strikes, which means refusal of workers to go to work, or to lock-outs, which consists in the employers refusing to allow workers to work. Strikes are more common than lock-outs, since the aggrieved party, the worker, mostly takes the initiative.

Should the workers have a right to strike? This is a controversial matter, especially in the case of public and quasi-public industries. Stopping of work in industries like railways, tram services, water and electric supply, causes the paralysis of the life of the community. As regards private industries, especially those that

are not basic, the right to strike is usually conceded. Even in public industries, however, if there are to be restrictions on the workers right to strike, justice demands that the grievances of the workers should be given a proper hearing and their rights properly safeguarded by public authority.

Industrial disputes leading to strikes in any case have serious consequences on the life of the community. The workers, the capitalists and the consumers/all have to suffer. The workers lose their wages, and the employers their profits and their hold on markets specially foreign markets and the consumer has to go without the service supplied by the industry concerned. It is necessary for all concerned therefore to create conditions which will reduce to the minimum the chances of industrial disputes. Further, machinery must be created to tackle disputes when they have occurred. The first involves the investigation of causes of industrial disputes.

Broadly speaking there are three causes which lead to industrial disputes and labour unrest in general.

(i) The desire of the workers for a higher standard of living. This involves the solution of the problem of an adequate wage. To meet this demand various modifications in the wage system have been suggested and tried in some countries, sliding scale system, the various bonus systems and profit-sharing schemes and fixing of minimum wages.

(ii) The desire of the workers for greater economic security. This involves the problem of unemployment which will be considered at the end of this chapter.

(iii) The demand of the worker for some participation in the management and control of industry. Several methods are suggested to achieve this end which we shall consider in the subsequent sections.

(iv) Disputes arise also on the question of working hours. These are, however, now fixed by legislation.

(v) Dismissal of a 'popular' worker or their leader, or non-recognition of the unions also sometimes cause disputes.

As regards the settlement of industrial disputes, after such disputes have arisen, conciliation and arbitration boards have been tried in several countries with a considerable measure of success.

6. Premium Bonus System. The bonus system is devised to meet the defect of the time-rate system and the piece-rate system. When wages are paid according to time the danger is that the worker will not put in his best. On the other hand, when wages are paid by the piece the worker is likely to produce work of inferior quality by hurrying it up. "The idea of the premium system," says Chapman, "of which there are many varieties, is that a standard output should be assented to, and that for any additional output lower piece rates, perhaps progressively lower piece rates, should be

paid." This prevents the worker from overworking, since extra earnings diminish as time goes on. There is, thus, less chance of hurried or scamped work. In this way defects of the peace rate system are removed without sacrificing its advantages.

There are various varieties of the premium bonus system. Sometimes a bonus is paid over and above an agreed time rate if the worker achieves the "efficiency rate" in respect of his output. In other cases the efficiency rate is the minimum and a bonus is paid in respect of any output in excess of this minimum. In the former case bonus is paid because of the time saved, in the latter because of the additional output produced. To give an example of the former there is the Halsey system of the United States. Here the bonus takes the form of a payment equal to half the ordinary time rate per hour for whole of the time saved. Supposing the time allowed for a job is 10 hours and the rate is 10 d per hour. A worker who completes the job in 8 hours would receive (10×8) d + a bonus of (2×5) d. a total of 90 d¹.

7. Sliding Scale. Under the sliding scale schemes wages are made to vary according to changes in the price of the product, or the cost of living or the profits earned by the industry. When wages are correlated with prices certain basic prices are taken. If the price of the product rises the wages are made to rise in a given proportion. If prices fall wages are reduced but generally they are not allowed to fall below a certain level. Similar arrangements are made as regards variations in the cost of living and profits.

The sliding scale system according to prices is sometimes criticised on the ground that it exposes the labourer to a shrinkage of wages due to factors which in no way reduce profits. For instance, prices may fall due to improvements in the methods of production, cheapening of cost of carriage, reduction in business risks, etc. Reduction in wages under such conditions will not be justified. This merely proves that basic rates should be revised frequently if warranted by changes in business conditions.

As regards the sliding scale according to cost of living, various objections have been raised against it. Among these are the imperfections of the index numbers, the fact that under such a system real wages tend to remain stationary, that only lower paid workers benefit from it.

To these objections the supporters of the system reply that the purpose of the system is merely to keep the purchasing power of money wages constant. To increase real wages labour must press its claims through its organization—the trade unions. Sliding scale system at least adjusts money wages to changing prices and leaves the labourers free to force a rise in real wages when necessary. Moreover, the objections can be met by improving the index numbers and by provision of full compensation for changes in the cost of living.

1. See S. E. Thomas—op cit. p. 341.

8. Profit Sharing. Under this system the workers are given a certain percentage share in the net profits of the industry in addition to their usual wages. Various methods are adopted, the most common being the *cash bonus scheme*. Under it a certain proportion of net profits of the concern are distributed periodically among the workers.

Several advantages are claimed for this system (i) that it reduces social friction and creates goodwill between the employers and the workers, (ii) that it binds the worker more closely to the firm, (iii) that it gives the worker incentive for greater output.

On the other hand the system is criticised on various grounds (i) that most of the benefit of additional output goes to the employer, (ii) that it destroys the worker's solidarity, (iii) that it checks mobility of labour, (iv) that profit sharing should also involve loss sharing. But this cannot be done unless the workers have share in the management and control of the industry.

9. Labour Co-partnership. This system resembles profit sharing closely. The only difference is that in profit sharing the workers are excluded from the control of the business, in co-partnership the workers are granted a limited share in control. This is done either by encouraging them to buy shares and thus getting the ordinary rights and responsibilities of shareholders or they are allowed to appoint one or more members as their representatives on the Board of Directors. This distinction has tended to disappear in recent years since committees of representatives of workers and employers have been increasingly set up for administering both the profit sharing and co-partnership funds. These committees also exercise wide powers in the details of workshop management.

The various merits and demerits pointed out above in the case of profit sharing also apply to co-partnership. With the additional defect that the worker is liable to lose both his savings and his employment in case the firm fails. Further, the labour directors are always in a minority.

The profit-sharing schemes have not solved the problem of industrial conflicts even in England where they have been given a fair chance. The scheme is, however, still in an experimental stage and has been applied only in a narrow field.

10. Works' Councils. One method of seeking co-operation of the workers in the control of business is that of workers' councils tried in England. The scheme was first formulated after the report of the famous Whitley Committee in 1917. Works' committees are organized in each firm consisting usually of equal representatives of workers and employers. In some cases only workers' representatives constitute these committees but they have access to the management for discussing outstanding questions. Apart from these, district councils are organized consisting of representatives of trade union and the employers in the industry concerned.

Works Committees also known as Whitley Committees succeeded to some extent in establishing peace and harmony between workers and employers. They created a greater sense of responsibility among the workers by giving them opportunities of influencing decisions in the conduct of business. Disputes in most cases were settled by voluntary discussion.

11. Minimum Wage. Another method of reducing industrial friction is by ensuring adequate wages through fixing a minimum wage by legislation below which it is an offence to pay a person. A minimum wage may be fixed in certain selected industries usually called "sweated trades" or it may be introduced on a national scale. Let us take the case of the selected industries first. Suppose the State fixes a minimum wage in the "sweated trades". What will be the economic effect of such policy on the worker, the employer, and the consumer? The consequences will be different under different circumstances.

Suppose a minimum wage above the competitive level is fixed in one or a few selected industries by law or by trade union pressure. The State can force the payment of a minimum wage but it cannot force the employers to keep employing all the workers. The services of some workers may be dispensed with and they may be replaced by more efficient workers. Thus the minimum wage scheme does not help those for whose benefit it was introduced. It merely leads to redistribution of labour. There is also the danger that the minimum fixed by the State is treated as maximum by the employers. There is thus a levelling down instead of levelling up of the wages.

If this higher wage can be shifted to the consumers the price of the product will rise and no unemployment may result. But it may not be possible to raise the price either because of foreign competition or because of the availability of substitutes. In other words when the demand for the product is elastic higher wages cannot be passed on to the consumers.

If the employer was earning only normal profits, as we have assumed, the burden will fall on profits, but it cannot fall on profits for long. If profits in such trades are depressed new capital and enterprise will not flow into them though the present capital may be worked at lower profits for a time, if it is specialised and fixed.

Ultimately unemployment will surely result either because of contraction of the industry concerned or due to substitution of labour saving machinery or labour saving methods of production.

Unemployment, however, may not result if wages form only a small proportion of the total cost of production. Then a slight raising of price may compensate the employer for loss incurred by paying higher wages.

Similarly unemployment may not result if the producer is a monopolist of the product concerned and the demand for the product is comparatively inelastic, e.g., supply of electricity, water, gas and other public utilities.

If the minimum wage fixed is below the competitive level such trades will attract capital and enterprise due to abnormal profits enjoyed by them. Their demand for labour will increase. The new recruits, however, will avoid such trades. Partly due to reduced supply of labour and partly to increased demand wages will rise to the competitive level.

If the sweated trades were previously giving abnormal profits a fixing of wage at the competitive level will not cause unemployment, it will mean a cut in the profits down to the normal level.

12. The National Minimum Wage. The fixing of a national minimum wage (*e.g.* a minimum for all the employments in the country) may have more serious results, especially if the wage is above the competitive level. In this case all loopholes are stopped. There cannot be any re-distribution of labour. Everywhere they must be paid at least this minimum wage.

To avoid its being counterbalanced by higher prices the national minimum will have to be a real minimum wage not a fixed money wage. Since no worker can be employed below this minimum, a worker dismissed by one industry cannot find employment in another. Dismissed workers would thus be permanently unemployed unless they improve their efficiency.

The burden cannot be shifted to the consumer by higher prices because higher prices must be followed by higher wages to keep the real wages the same. Profits could not be maintained by altering methods of production since the prices of labour saving machinery and other devices would also rise. The result therefore will be widespread unemployment and contraction in all sorts of enterprises. This will check accumulation and investment of capital.

Moreover, the unemployed will have to be maintained from public funds which will mean higher taxation and a still greater burden on industry and enterprise and still greater unemployment. Thus while productive activity will decrease taxation due to expenditure on the growing unemployed persons will increase. The community will head towards nation-wide poverty by living on its past savings. The springs of economic activity will dry up if this policy is persisted in long enough.

But it is not to be inferred that fixing of a minimum wage is necessarily detrimental to the interests of the workers. There are several circumstances in which it is bound to prove beneficial to them.

(1) In industries where large capital has been sunk and expensive specialised plant is in use, the industrialists are helpless. They must carry on even if the wages impinge on profits. In such cases profits are squeezable. The workers can continue receiving a high wage without any immediate danger of unemployment arising out of the closing of factories.

(2) It is possible that increased wages may be spent by the workers in such a manner that their efficiency is improved. This

will raise their marginal productivity and they will begin deserving the high wage even if they did not deserve before. The increase in wages will then cease to be at the expense of profits and there will be no danger of capital being driven out and unemployment being caused.

(3) It is very likely that the workers being poor and unorganised were being exploited by the employers. The raising of the wages will only be an act of belated justice and there will be no reason for the employers to send them away.

(4) Finally, if the country maintains a system of unemployment benefits, the workers do not suffer. They receive the doles from the State all right the burden of which falls on the wealthy tax-payers. The minimum wage thus proves an instrument for the transfer of wealth from the rich to the poor and makes for economic and social justice.

Fixing of the minimum wage can be advocated on some positive grounds: (a) It will guarantee a reasonable standard of life for the workers, improve their efficiency and lift them out of the morass of poverty; (b) it will curb the selfish and anti-social activities of unscrupulous employers who exploit labour and try to reshuffle labour to avoid paying a minimum wage fixed for certain trades; (c) it will weed out inefficient employers who cannot earn enough to pay the minimum wage. The standard of industrial management will rise.

It must, however, be recognised that the minimum wage will make the wage system of the country rigid and inelastic so that it will be difficult to adjust costs to prices. There is also the difficulty of fixing the wage. If it is fixed too high, competitive strength of the industry will be impaired or employment will diminish. If it is fixed low, it confers no benefit on the workers.

13. Settlement of Industrial Disputes. In spite of all these efforts at avoiding occasions and causes of disputes, however, disputes may occur and they do occur. It is therefore necessary to have some machinery for the settlement of disputes after they have arisen. There are usually two methods of meeting such situations: (i) Conciliation, and (ii) Arbitration.

(i) *Conciliation.* The essential feature of this method is that the settlement is reached by the representatives of workers and employers themselves, with or without the mediation of an outside person. In England the Conciliation Act of 1896 permitted the registration of any Conciliation or Arbitration Board for the purpose of bringing the parties to the dispute together and thus avoiding strikes and disputes. By another Act in 1911 this scheme was strengthened by instituting joint panels of employers and representatives of labour known as Industrial Councils. These councils have done very useful work. In India the Trade Disputes Act of 1929 empowered the Government to appoint a Conciliation Board to enquire into any dispute on the application of one of the parties. Such arrangements, however, do not eliminate all possibilities of

strikes since there is usually a feeling of distrust especially on the part of the trade unionists.

When the chairman is absolutely independent and a man of outstanding personality and integrity conciliation boards have done excellent work. This was the case in Ahmedabad where Mahatma Gandhi usually acted as the arbitrator.

(ii) *Arbitration*. In the case of arbitration the question at issue is placed before an outside person for settlement. Arbitration may be voluntary as in England or compulsory as in Australia and New Zealand. Under voluntary arbitration the dispute is referred to a Court of Arbitration (constituted in England under the Industrial Courts Act of 1919) consisting of representatives of employers and workers. The dispute may be referred to the Court either by the consent of both parties or by the Minister of Labour without the consent of either of the parties. The award of the Court though generally accepted is not binding on the parties. The report of the Court is published and the pressure of public opinion in many cases forces the parties to accept the decisions of the Court.

In Australia and New Zealand in the case of industrial disputes the decision of the Court of Arbitration is binding on the parties. Strikes and lock-outs are prohibited by law and are punishable by fine or imprisonment. Compulsory arbitration may involve considerable hardships especially in countries where the scope for alternative avenues of employment is limited. In Australia, since agriculture is outside the scope of the Arbitration Act, there is an outlet for capital or labour. "In fundamental industries," says Chapman, "upon the steady activity of which the whole community is dependent, for instance transportation, there is most to be said for the system of compulsory arbitration."¹

14. Unemployment. One of the greatest causes of labour unrest in modern industrial countries is the insecurity of employment. The spectre of unemployment constantly haunts the working classes. It has been described as the "shadow side of progress" and its fear is stronger than the fear of any other disability to which the labourer is subject, i.e., sickness, old age or even death. It is necessary, therefore, to find out the basic causes of this malady of the modern economic system in order that adequate remedies may be suggested.

Technically speaking, unemployment is defined as a state of affairs when in a country there are large numbers of able-bodied persons of working age who are willing to do work but cannot find it at the current wage levels. People who are either unfit for work for physical, mental or moral reasons or who do not want to work are excluded from the category of the unemployed. Those who are unfit may be called unemployables and those who are fit but refuse to work are parasites on society. Both of these categories are quite common in this country. Children, the sick

¹. Chapman—op. cit., p. 351.

and the very old or otherwise completely disabled are examples of the first. Pirs and faqirs and sadhus, and non-working landlords are examples of the second.

Merely engagement in some productive occupation does not necessarily mean absence of unemployment. People who are only partially employed or are doing inferior jobs, while they could do better jobs, are not adequately employed. If this phenomenon is common in any country we call it a state of under-employment which is equally bad for the prosperity of the country. Full employment exists when every able-bodied person is employed in doing that work for which he is best fitted. Full employment is the ideal. It can exist only in a perfectly planned economy like that of Russia. Under capitalism it seems unemployment is inevitable. The best that can be done is to keep the number of the unemployed as low as possible.

15. Causes of Unemployment. Chapman distinguishes between *subjective* and *objective* causes of unemployment. Subjective causes are due to physical, mental or moral defects of the individual, whether inborn or acquired, curable or incurable. The objective causes spring from the forces over which the individual himself has no control. Such are: (i) trade cycles, (ii) seasonal demand, (iii) seasonal supply, (iv) industrial changes which are neither cyclical nor seasonal, (v) the system of casual labour, and (vi) the social time lag. A few words may be said about each of the objective causes. As regards the subjective causes according to the definition adopted by us, people who are unfit for employment are not counted among the unemployed.

(i) *Trade cycles* We shall study trade cycles in a separate chapter. Suffice it to say here that business depressions recur at more or less regular intervals. During times of depressions business activity is at a low ebb and unemployment increases. Some people are thrown out of employment, others are only partially employed. How much unemployment will be created depends upon the elasticity of wages. If wages can be reduced more people can be kept on employment, but trade unions usually resist wage reductions. Hence those who do not "earn" their wages under the new circumstances have to be dismissed.

(ii) *Seasonal demand.* Some economic activities are seasonal. Owing to the slack season the demand for labour is considerably reduced and unemployment is the result. Ice factories for instance work only during summer months. Employment in agriculture is seasonal. From three to five months in a year our agriculturist has very little to do. He is under employed between the time of sowing of crops and reaping of the harvest.

(iii) *Industrial changes.* These imply the invention of new methods and processes. But since methods of production usually change only slowly many workers are not thrown out of employment simultaneously. If, however, such changes are rapid, as it happened

when the Industrial Revolution occurred, large masses are thrown out of employment. This happened to our artisans engaged in indigenous industries when foreign machine-made goods began to flood the Indian market during the 19th century. Technical advances, however, if they occur in the same countries ultimately create new forms of employment and absorb the surplus labour. But since labour cannot easily move from place to place and employment to employment considerable distress may be caused during the short period.

(iv) *Casual labour.* Casual labour is labour employed for short periods for doing odd jobs, such as labour in dock yards and similar places. Usually such people are of poor physique, intelligence or industry and get employment only when trade is brisk. They are constantly leaving one job for another. "Many people who are prone to slackness like, or drift into, work of the casual kind, and as many who take to it succumb to slackness, irregularity in the provision of work is encouraged."¹

(v) *Social time lag.* Social time lag refers to the period which intervenes between a worker's leaving one employment and finding another. This period is larger in times of bad trade and shorter when business activity is on the upward grade. It also varies with the character of the labourer and the kind of his economic environment. It is quite possible to have surplus of labour on the one hand and shortage on the other. This is due to the lack of proper contact between those who want workers and those who want jobs.

(vi) *High wages.* We may add that unemployment may also be caused by trade union action. If trade unions succeed in enforcing a level of wages not justified by the marginal productivity of labour such labour is bound to be dismissed sooner or later. The same will happen if a legal minimum wage is enforced which is above the productivity of the labour concerned.

(vii) *Growth of wealth.* According to Keynes², unemployment may also result from the growth of wealth in a country. With the increase of their incomes people tend to spend a smaller and smaller proportion of it on immediate consumption. This reduces the demand for consumption goods and hence the profits of the entrepreneur producing such goods. The entrepreneurs react by cutting down the volume of employment they offer to the factors of production including labour. This tendency can be counteracted if the larger savings lead to larger investment. But in wealthy countries opportunities of new investments are comparatively few. Hence new investments may not counteract the effect of the relative reduction in consumption. The result is that a portion of the labour force will be unable to find employment.

16. Remedies for Unemployment. The best remedy for unemployment is economic planning. Under a planned economy

1. Chapman—op. cit. p. 351.

2. Keynes' General Theory of Employment, Interest and Money.

there need be no unemployment. During the great depression (1929-1934) there were over 2½ millions unemployed in the United Kingdom and over 4 millions in the U. S. A. In the planned economy of Russia there was not a single unemployed person.

Short of socialistic planning, however, various remedies can be adopted to keep unemployment down even in a capitalistic society. Among these are :—

(i) *Establishment of Employment Exchanges.* These are institutions which keep registers for the names of the unemployed persons, their qualifications and needs on the one hand and record of the needs of the employers on the other. Thus they bring people in search of work and those in search of workers together. Apart from this some other advantages also flow from such institutions. They not only reduce the social time lag but also furnish information which may enable the labourer to improve himself. Further such a system can help children and young persons to find employment after leaving school. They can also give advice for continuation of education or training after the school stage. Finally, they can be used to minimise casual labour, which can be helped to find more regular employment.

(ii) Unemployment due to trade cycles can be tackled in two ways :—(a) by spreading the reduced demand for labour over all the affected trades, and (b) by making public demand for labour compensatory.

As regards the first, demand for labour can be spread by running the industry short time, or by working with short-time shifts of labour. "It would seem better," says Chapman, "that all the operatives in an industry should do less and earn less than that some should earn nothing at all, if aggregate wages in the industry were no less, or barely less, in the former case."¹ Some suggest that the employers should pay aggregate wages to the labour unions concerned which should provide regular wages to all the workers.

As regards the second, the demand for labour on the part of public authority should be made to vary inversely with the demand by industry. Thus public works of various kinds (construction of public buildings, railways, roads and canals etc.) should be started in times of depression when the private enterprise is at a low ebb. This will not only give employment to those who are employed in such works but will also stimulate private enterprise by creating demand for goods on the part of those workers. This can start an upward swing in the economic activity. Conversely, during times of busy trade the public authorities should, as far as possible, refrain from carrying out public projects. This involves careful planning so that special bodies (e.g., national employment and development boards) should be created to plan out and execute compensatory public expenditure.

1. Chapman—op. cit p 355.

(iii) Seasonal unemployment can be tackled by dovetailing one seasonal trade with another. Further, stocks of goods may be made during the slack season or advance orders taken and thus employment spread out over the whole year.

As regards the unemployables they can be helped in various ways.

First, arrangements should be made for the reformation of drunkards, vagrants and other social parasites. Secondly, provision should be made for the restoration of those who have become unemployable through physical unfitness which is curable.

Mitigation of distress of the unemployed is another problem.² One obvious method is to encourage the habit of saving among the workers so that they may have some reserve to fall back upon during periods of unemployment. Savings may be left to the initiative of individual workers. But this method is not very effective especially where the margin for savings is very narrow. Another way is for the trade unions to create their funds through contributions by the members and thus give them insurance against unemployment. The more recent tendency in advanced countries is for the State to institute unemployment insurance. The insurance fund for this purpose is composed of contributions by the worker, the employer and the State. This brings us to the broader problem of social insurance which covers not only unemployment but other disabilities to which a worker and his family is exposed.

17. Social Insurance. Social insurance may be defined, in the words of Cohon, as "that part of the total field of insurance in which the risks or hazards covered result from the inability of the workman either to make a wage contract of a kind which will enable him to maintain a satisfactory standard of living for himself and his family or to carry through his part of the contract owing to physical incapacity." The chief of such risks arise out of (a) temporary inability to make a living due to accident, disease, ill-health or unemployment, (b) permanent incapacity due to disablement or old age, and (c) death involving unprovided widowhood and orphanhood.

For the sake of illustration we may take the various forms of social insurance prevailing in Great Britain which has made probably the greatest advance in this connection. These are: (i) Unemployment Insurance. (ii) Health insurance. (iii) Old-age Pension Scheme. (iv) Widows' and Orphans' Pensions Scheme. Finally we shall give some account of the latest and the most comprehensive measure of the social security scheme associated with the name of Sir William Beveridge.

(i) *Unemployment Insurance.* It was in 1911 that by an Act of Parliament the first system of compulsory contributory unemployment insurance was established in certain selected trades in Great Britain. These trades were considered particularly liable to irregularity of employment. The success of the scheme led to its extension

so that by 1920 with the exception of persons engaged in agriculture and private domestic service the whole of the industrial population was compulsorily insured. Later, due to the slump and the distress it caused, Parliament grafted on this scheme a system of "uncovenanted" benefits. This meant giving benefits to workers and their families beyond those stipulated in the original scheme. This meant great burden on the national exchequer. As the result of the findings of a Royal Commission on Unemployment Insurance (Dec. 1930) in the Supplementary Budget of 1931 reduction was made in the benefits and provision was made for increased contributions from employers and workers. A "means test" was also introduced in order to eliminate from benefits those who had some other reasonable means of support. In 1938 there were over 14 million persons insured under the scheme.

Under this scheme an Unemployment Insurance Fund is constituted by compulsory contributions by the workers and the employers together with the amount contributed by the State. Out of this fund unemployment benefits are paid and administrative expenses met.

Benefits are paid to able-bodied persons (between the ages of 14 and 65), who are willing but unable to get employment in their own trade at the current rates of pay.

(ii) *Health Insurance.* This is another contributory scheme. To a national health insurance fund workers and employers are required to make contributions. In the case of male workers the contributions of worker and employer are of equal amount, while for female workers the employer pays a little more. The State contributes $\frac{1}{7}$ th in the case of men and $\frac{1}{6}$ th in the case of women.

Normally the benefits provided are : (a) A sickness benefit of a fixed sum of money for not more than 26 weeks in case the worker is incapacitated from engaging in gainful employment ; (b) after the 26th week a disablement or invalidity benefit, so long as the worker is incapable of gainful employment ; (c) a maternity benefit to the wife of an insured person, which is increased if she herself is an insured person, (d) medical benefits like provision of medicines, treatment, etc.

Health insurance is compulsory for all manual workers between the ages of 14 and 65 years, and non-manual workers earning under £ 250 who have not claimed the right of exemption.

(iii) *Old-age Pensions.* Introduced into Great Britain first by the Act of 1908 the old-age pension scheme provides for payment of pensions to all persons who have reached seventy years of age and have been British subjects for at least ten years. The whole of expense of the scheme is met by the State. People earning an income of £ 50. or more a year are not eligible for the pension. the maximum pension that a person can receive is 10s. per week.

Benefits proposed by Beveridge. The benefits proposed in this scheme by Sir William Beveridge are tabulated below. They have not yet been accepted by the Government in their entirety but it is unlikely that the modifications will seriously depart from the recommendations of the report.

(a) <i>Unemployment and Disability (Sickness benefits)</i>		<i>per week</i>
Single man or woman aged 21 or over	...	24s.
Married man with wife working	...	24s.
Married man with wife not working	...	40s.
Married woman with husband working	...	16s.
(Lower rates for boys and girls under 21)		
(b) <i>Retirement Pension (in 1965).</i>		
(Liable to partial reduction for any earnings)		
Man and woman (joint pension)	...	40s.
Single man or woman	...	24s.
Man with wife working or woman with husband below 65	24s.
(c) <i>Women only, Maternity benefit</i>		
(13 weeks) (In addition to maternity grant of £4)		
Married woman wage-earner	...	36s.
Widow's benefit (13 weeks)		36s.
(d) <i>Dependent allowances (in addition to above)</i>		
For each child in family	...	8s.
For each dependent above 16	...	16s.
(e) <i>Industrial Pension.</i>		
For total disability (after 13 weeks sick pay) $\frac{2}{3}$ of weekly wage but not more than £3 plus children's allowance and not less than sick pay plus dependent allowance if any.		
(f) <i>Marriage Doury (lump sum).</i> Grants up to £10 for women wage-earners		
(g) <i>Adult funeral grant (lump sum)</i>		
Child under 3	£ 6
		£20

It was estimated that at 1942 prices the total cost of the whole scheme in 1945 would be £700,000,000 a year. The benefits enjoyed by the people before the scheme should cost in 1945 as much as £450,000,000. Thus the additional cost of the scheme could be put at £250,000,000 for the year 1945. By 1965 it was estimated the scheme would cost £ 850,000,000 a year of which 60% would come from the exchequer.

Can Britain afford this cost? Yes, Britain can for the simple reason that this cost by improving the quality of the people will enormously increase the national dividend. Experience of such services since 1906 shows that they have amply justified themselves. In the words of Sir Ronald, "So far they have been a paying proposition for they have vastly improved the quality of our people. Without them, for instance, we should have been lamentably worse off in this dread war. We could neither have fought so well nor

have produced such mighty armaments. The blitz might have been our undoing."

The cost will be hardly 10% of the national dividend of the country. More than 85% of the contributions will be paid by families of modest means, who will also pay the direct or indirect taxation necessitated by the scheme. Ultimately, therefore, it is a redistribution of consuming power between millions of modest households. It does not mean so much extra consumption. It is not likely to encroach upon the capital accumulation of the nation.

Select References

1. Brij Narain—Principles of Economics pp. 304—336.
(S. Chand & Co.)
2. Chapman of. cit pp. 351 onwards.
3. Keynes—General Theory of Employment, Interest and Money.
4. Sir R. Davison—Social Security, page 11 onwards.
5. Beveridge—Social Security Scheme.
6. Thomas—Elements of Economics with special reference to pages 266 to 271 and 301 to 335.

CHAPTER XXIX

INTEREST

1. Introduction. Interest is the price paid for the services of the third factor of production, i. e., Capital. Though capital appears in the money market as 'loanable funds', yet it ultimately consists of tools and equipment used for further production as against consumers' goods which are utilized for deriving direct satisfaction. Loanable funds used as capital merely help in transferring real resources from producing consumers' goods to producing capital goods. Interest, however, is normally calculated as a percentage on the money borrowed or lent.

This chapter is confined to the study of the nature and problems of interest. Much of what is called interest is not the price of the service of Capital as such. What people call interest is really gross interest. Pure interest is only a small proportion of gross interest as we shall explain. Much of the variations in interest rates are explained by this fact. Pure interest tends to equality in different employments provided competition is free and perfect. But what determines pure interest? There are various theories the most widely accepted one being the marginal productivity theory as already studied with respect to rent and wages. The element of time is as important with regard to this aspect of value as any other. This will also receive our attention when we distinguish between short and long time rates of interest. Then there are some miscellaneous problems to be considered regarding the attitude of the people towards interest from time to time, the influence of progress on interest, the possibility of interest disappearing altogether and so on.

2. Gross and Net Interest. The total amount which the debtor pays to the creditor is known as Gross Interest. All that the borrower pays to the lender is not pure or net interest, i. e., the price paid for the services of capital. It is mixed up with so many other elements of which Pure or Net Interest is only one. It is thus necessary to analyse the total interest paid (gross interest) into its component parts. These consist of:—

(a) *Pure Interest.* This is a payment for the services of capital or for the money borrowed.

(b) *Insurance Against Risk.* The lender is exposed to risks when he lends money. A certain amount must be paid to him to cover these risks. These risks are of two kinds: (i) *Personal risks* due to the unreliable character of the borrower himself, and (ii) *trade risks*. Trade risks are due to the varying fortunes of the business in which the money is invested. Thus the lender may fear that either the borrower may refuse to pay back his money or the interest on it, or that he may lose the money in his trade. The greater the risks of

this kind, the higher will have to be insurance money that the lender will expect before he is willing to lend.

(c) *Wages of Management.* A part of the payment may be due to wages of management. The lender has to keep accounts, and to arrange for continual new loans for short periods. Money lending is his whole-time job.

(d) Finally, there is the return for inconvenience strictly so-called. When a man lends money he loses command over it for a period. He is unable to make use of it himself if he wants to, since his money is locked up. Favourable opportunities of its employment may slip by. Inconvenience is of two types. The lender may not get the money when he needs it and he may have to borrow from others on interest. Or he may get the money when he cannot find for it some safe investment so that the money lies idle and he loses interest. He must, therefore, compensate himself for such losses. Hence he charges something extra over and above pure and net interest.

Keeping these facts in mind it will become clear why the village money-lender's rates are high in spite of competition among the lenders. The risk and inconvenience involved is great. Similarly the pawn brokers seemingly charge very high rates when calculated on annual basis. But they have to undergo an immense amount of trouble in their business in keeping small individual accounts etc. This also explains why governments especially those with sound financial traditions can borrow at extremely low rates of interest. Here the risk and inconvenience to the lender is negligible and the interest paid is mainly "pure interest." The return on British Consols (long-term British Government securities) is a classical example of the pure rate of interest. Among the banks also the sounder the bank the lower the interest it pays to its depositors. Thus beware of the banks which promise high rates of interest.

3. Differences in Interest Rates. Pure interest tends to be the same if calculated over the same period of time in the same money market. The actual differences that prevail are differences in gross interest. In other words, they are due to differences in the degree of risk involved and inconveniences suffered by the lender. Pure interest, however, may be different in different investments when the market is not the same. This may be due to :—

(a) *Differences due to distance.* People are usually more willing to invest their capital nearer home than at a long distance. This may create differences in supply and demand due to comparative immobility of capital.

(b) *Differences due to time.* If people have to part with their money for a longer period, they expect higher rates even though risks and other factors are the same. Of course if money is lent for very short periods and has to be re lent again and again, the inconvenience of management will increase gross interest. But that will not be net interest.

Differences in gross interest, in addition to the causes already considered, according to some writers arise due to :—

(i) *Differences in social esteem.* A person with greater reputation for integrity can borrow at lower rates. This is partly due to the element of lower personal risk already considered.

(ii) *Differences in productivity.* Where capital can earn greater reward for the producer, he will be willing to pay higher interest. But here also usually such trades are more speculative and higher interest can be attributed to higher risks. Moreover, under perfect competition, as we shall see, marginal productivity of capital and hence the pure rate of interest tends to equality. Higher rewards in particular employments if not justified by greater risk or inconvenience tend to disappear through forces of competition. But if competition is imperfect such differences may persist.

Productivity of capital may differ in different countries. In new countries for instance the demand for capital is great while the supply is very limited as compared with old countries. Capital thus has a high marginal productivity, and interest is high. This is due to the immobility of capital over distances as already noted. Partly it is due to greater risk. In the latter case it is gross interest which will be higher not net interest.

Thus ultimately differences in interest rates can be reduced to differences of inconvenience or risks of lending except in cases where we are not dealing with the same market. Pure interest tends to be the same in the same market.

4. **Different Forms of Investments.** Before we pass on to the determination of pure interest, it will be instructive to take note of the various forms of investments each yielding different rates of (gross) interest according to circumstances. A person who saves money can invest it by acquiring various kinds of assets the most important of which are (i) bonds, (ii) shares, (iii) bills and (iv) money balances.

(i) *Bonds.* Bonds are long-term fixed interest-bearing securities. They give their holder the right to a fixed money income. The most typical example is first class Government bonds also called gilt-edged securities. If a person lends £100 to British Government he may get the British Government securities bearing 3% interest. This will give him an income of £3 a year as long as he holds such a security. Of course he can sell the security through the stock exchange. The capital value of the security will vary with the rate of interest at which the British Government can borrow. If such a rate of interest for instance rises to 6% the price of the security will be only £50, because by lending £50 a person can earn £3 a year as interest at the 6% rate. If the rate of interest falls to 2% the value of the security bearing a 3% interest will rise to £150, because at the current rate one will have to lend £150 to earn £3 as interest. Thus a rise in the Government rate of interest correspondingly reduces and a fall correspondingly increases the value of fixed interest

securities. Conversely a great demand for fixed interest securities will tend to raise their capital value and reduce the long-term rate of interest, and a great supply of such securities will reduce their face value and raise the long-term rate of interest. This long-term rate of interest thus is represented by the rate at which the government of the country can borrow money for long periods. At any time it is measured by the "yield" of long-term Government securities expressed as a percentage of their current price.

An example will show how this yield may be calculated. On 23rd of April 1946 the price of $3\frac{1}{2}\%$ non-terminable bonds of the Government of India (Rs. 100 face value) stood at Rs. 102-14-6. This meant that an investment of Rs. 102-14-6 brought an income of Rs. $3\frac{1}{2}$ in a year. Therefore, the yield per cent was :

$$\frac{3.5 \times 100}{102.9} = 3.4$$

3.4% was thus the current rate of interest at which the Indian Government could borrow for long periods.

Another form of fixed interest securities are "debentures" issued by various firms. Their yield is higher because of the greater degree of risk involved as compared with Government bonds. The yield of securities varies with the amount of the risk, their marketability and also with the distance of the rate of their repayment if it is a terminable security.

The advantage of a bond thus is that it yields a fixed income, but the disadvantage is that its market value may fall, or the current long-term rate of interest may rise.

(ii) *Shares.* While a debenture holder is purely a lender, a shareholder is the owner of the company to the extent of the value of his share. The income from shares or rather "ordinary" shares is a fluctuating income. The shareholder shares in the profits of the company and thus bears a much greater degree of risk than the bond holder. While the bond holder may get a safe 3% , the share holder may get 5% or more or less according to the profits earned by the company.

The profit from the capital invested in a company is the net yield after deducting depreciation charges expressed as a percentage of the current cost of the assets. The original cost has little significance. For instance if a machine was purchased at Rs. 10,000 but its present value is only Rs. 8,000, the profit will be calculated on Rs. 8,000 and not on Rs. 10,000.

How may the value of fixed capital be reduced ? One reason may be its wear and tear or depreciation. But apart from this the value of a brand new machine may be reduced not because it has undergone any wear and tear but because of the invention of more efficient machine doing the same work. The fall in the value of the old machine will be in the ratio of its efficiency as compared with the efficiency of the new machine.

"Let us assume that at any given time the yield of sugar machinery is equal to the market rate of interest, if better machinery came into use whose yield was 50% greater, the capital value of the old machinery would fall by 50% though its efficiency remained unimpaired."¹ The profit will be calculated on the reduced value of the machine.

It should be noted that the rate of profit and the rate of interest are not independent of each other. They tend to move together and apart from the differences due to the degrees of risk tend to approximate with each other. If the rate of profit for instance is higher by an amount beyond what is justified by the greater risk, people will buy shares rather than bonds. The price of shares will increase and that of bonds decrease. In other words the rate of profit will fall and of interest rise until they are approximately the same.

(iii) *Bills*. Bills are short-term fixed interest securities. Bills may be private bills issued on account of trade or financial transactions by private individuals or corporations, or they may be public bills issued by the Government. The latter are called Treasury Bills. Through their sale the Government borrows money for short periods, usually three months. For instance, the Government may sell Treasury Bills at Rs. 99-8-0 to be repaid after three months at Rs. 100-0-0. This means a yield of as. 8 on Rs. 99½ in three months or Rs. 2 in year or 1.99% per annum.

The yield of short-term security is usually lower than of long-term security because the risk of loss of capital in the former is much less than in the latter. The longer the time the greater the risk of depreciation of the value of the security. Moreover bills can be easily discounted at a small loss of interest for the period the bill is yet to run. If not discounted the holder gets its full value within a short period of time when the bill matures. The drawback of the bill is that the interest it earns is much lower than that of the bond.

(iv) *Cash Balances*. Holding one's resources in the form of cash or cash balances in a bank involves practically no risk of loss but the money earns no income. Lending of money even for short periods involves some risk. Cash in hand is also convenient for carrying on day-to-day transaction and to meet emergency expenditure. Hence people do hold some of their resources in a "liquid" form. The payment required to induce people to part with "Liquidity" in this sense is usually represented by short-term rates. In times of financial panic these rates go up because firms are anxious to borrow money for short periods to meet their obligation in order to avoid bankruptcy. This increases their desire for liquidity. More of this later.

5. *Long-term and Short-term Rates of Interest*. We have discussed above the various forms which investments may take, i.e.,

1 Brij Naram : Principles of Economics, 3rd Edition, p. 344.

the kinds of assets that a person may hold. Some of these involve lending money for long periods (bonds) and others for short periods (bills). What is the connection between the two?

Generally speaking long-term loans yield a higher rate of interest than short-term loans. We have already noted the reason for this. The risk of depreciation of the value of long-term securities is much greater than of short-term securities or bills. Part of the long-term interest, therefore, is compensation for the additional risk. The longer the period the greater the risk of either non-payment or of depreciation in capital value.

It is, however, possible for long-term rates to be lower than short-term rates in some cases. If the investing public has a high degree of confidence in the stability of future conditions they may be willing to lend at lower rates for longer periods. The bonds (long-term) carry lower rates than for instance what is charged on over draft (short-term loan). But the bonds have ready realisability. The bonds can be sold and cash realised. Hence in the case of bonds money is not irrevocably locked up for long periods. On the other hand short-term bank loans are generally renewed. Over draft arrangements become permanent. Hence the short-term loan is not really short-term just as the bond may not be really a long-term investment.

Longer loans save the botheration of reinvestment of surplus funds. Such conditions, however, are not very common in the modern world of uncertainties.

Short-term rates fluctuate more violently than long-term rates. The reason is that changes in rates usually first occur in the short loan market, and the long-term (real not nominal) rates tend to move in sympathy with short-term rates. If the short-term rates for instance rise sharply investors will tend to sell their long-term securities and invest in bills and other short-term paper. The pressure of sales will lower the value of securities and correspondingly raise their yield. Thus long-term interest rates will be raised. The converse will happen if short-term rates fall. People will tend to move their funds from the short-term to long-term markets and the greater demand for long-term securities will raise their capital value. The yield of such securities will be lowered and the long-term rate of interest will fall.

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6. Productivity Theory of Interest. Some older economists thought that interest is productive of goods in the same sense as land is productive of crops. They held that interest exists because capital leads to greater production than would be the case without its use. Capital no doubt is productive but not in the same sense as a flock of sheep or fertile land is productive. Capital is productive in the sense that labour assisted by capital produces more than without capital. A fisherman with a net can catch more fish than without it. A farm labourer with a tractor can produce more than without a tractor.

The productivity theory no doubt explains why interest can be paid by the borrowers ; it does not explain how interest rates are determined. If interest depended merely on productivity (not marginal productivity) interest rates should vary in proportion to the productiveness of capital. In actual fact pure rate of interest tends to be the same in the same country. Further if capital helps labour to produce more how much of this extra production is due to capital and how much to labour, since capital without labour produces nothing. Then what about loans for consumption purposes. They are not productive but interest has to be paid on them all the same. As we shall see later these objections can be overcome if we talk in terms of marginal productivity and not mere productivity of capital.

7. Abstinence or Waiting Theory of Interest. The Productivity Theory tried to explain interest from the side of demand ; the Abstinence Theory approaches the problem from the side of supply. It was Senior who first pointed out that saving involved a sacrifice or "abstinence" as he put it. Saving was an act of abstaining from consumption. Since to abstain was painful it was necessary to reward people for this act. This reward was the interest paid to those who saved rather than consumed their incomes or rather a part of their incomes.

The idea of abstinence was widely criticised on the ground that it suggested positive discomfort while many of the rich people save without the least inconvenience. Thus it was that Marshall substituted the term "waiting" for "abstinence." Saving implies waiting. When a person saves, he does not refrain from consumption for all times, he merely postpones present consumption to a future date. Meanwhile he has to wait. But since most people do not to wait an inducement is necessary to encourage this postponement of consumption. Interest is the inducement.

Waiting is involved in all productive processes. There is a time lag between sowing and reaping, between starting the manufacture and receiving the sale proceeds. Waiting is thus a separate factor of production which is more important in capitalist societies due to the more roundabout methods of production adopted.

Some waiting, however, may be forthcoming without any inducement in the way of interest payment. Other people will wait even with negative rate of interest. But savings thus undertaken will not be enough to meet the demand for capital. Interest must be paid to induce other people to save in the case of which waiting does involve inconvenience. The rate of interest must be high enough to bring forth the marginal increment of saving or waiting in order to meet the demand for production. The rate of interest will be fixed at a level at which the supply of waiting will be equal to the demand.

This theory has a considerable element of truth in it but it does not clearly analyse the force acting on the side of demand for capital.

✓ 8. **The Austrian or Agio Theory of Interest.** It is also called Psychological Theory. First advanced by John Rae in 1834, this theory was put in its final shape by Bohm Bawerk of the Austrian School of Economists. It became popular later among some American economists like Fisher, with slight modifications.

The gist of the theory of Bohm Bawerk is that interest arises because men prefer present goods to future goods and therefore there is an 'agio' or premium on present goods. One bird in hand is worth two in the bush. The present gratification is attached greater importance than future satisfaction. In other words future satisfactions when viewed from the present undergo a discount. Interest is this discount which must be paid in order to induce people to lend money or postpone present satisfactions to a future date. Interest is intended to equate future satisfaction to present satisfaction. Thus Rs. 100 after one year is not valued as equal to Rs. 100 now. To induce a person to part with Rs. 100 now, it is not enough to give him a promise of the return of only Rs. 100 after a year. The borrower must pay more otherwise the lender will feel himself defrauded. Rs. 100 a year from now may seem only equal to Rs. 95 to the lender at present. Thus if Rs. 95 is lent today the lender will expect Rs. 100 after one year.

Why do people prefer present satisfactions to future satisfactions? Bohm Bawerk gave three reasons for this fact. One is the "prospective under-estimate for the future," in other words by the very nature of things the future is less clearly perceived than the present. 2. In the second place, present wants are felt more keenly than future wants. The result is that the demand for present goods is greater than that for future goods. Hence present goods are relatively more scarce in relation to demand than future goods and are thus valued more highly. 3. Thirdly, present goods possess "a technical superiority over future goods." This is so because the passage of time allows the use of more roundabout methods of production, which are more productive and thus lead to considerable increase of output in the future as compared with the present. Fisher denies the validity of this third proposition though he agrees with the first two. Fisher contends that this is merely the productivity theory which Bohm Bawerk himself so vehemently criticised,

✓ 9. **Fisher's Statement of the Theory.** Fisher emphasizes the fact of "time preference" as the central point in the Theory. Individuals prefer present satisfactions to equally certain future satisfactions. They are thus impatient to spend their incomes now. This degree of impatience depends upon the size of the income, distribution of income over time, the degree of certainty regarding its enjoyment in the future and the temperament and the characteristics of the individual. Thus people with larger incomes are likely to have their present wants more fully satisfied and will thus discount the future at a lower rate than poorer people.

As regards distribution of income over time three kinds of situations may be imagined. The income may be uniform throughout

one's life, increase with age, or decrease with age. If it is uniform the degree of impatience to spend (*i. e.*, the rate of discounting the future) will be determined by the size of the income and the temperament of the individual. If the income increases with age it means the future is well provided for, the tendency will be to discount the future at a higher rate. If the income decreases with age the converse will be true, *i. e.*, the future will be discounted at a lower rate.

As to the degree of certainty, it is clear that the greater the certainty of future enjoyment of income the smaller the degree of time preference or the rate of discounting the future and *vice versa*.

Finally, the character of the individual will influence this time preference. A man of forethought will discount the future at a low rate compared to a spendthrift.

Thus the rates of individual time-preference after having been determined in this way tend to become equal to the rate of interest. An individual with higher rate of time preference compared with the market rate of interest tends to borrow money in order to satisfy his more pressing wants. If his rate of time preference is lower than the market rate of interest he will lend to the market and make a gain thereby. Thus the individual will vary his income-stream by borrowing or lending. This process will tend to equalise the rate of interest with the rate of time preference.

The Agio Theory has been criticised¹ on the ground that though it does recognize the effects of demand for capital interest it attaches too much importance to the supply side of the problem. This is unjust especially as far as Bohm-Bawerk's version of the theory is concerned. His third reason why individuals prefer present goods to future goods leads directly to the productivity theory, rather the marginal productivity theory. In fact it was a cardinal feature of Bohm-Bawerk's thought that the "round-about" structure of production, *i. e.*, production in specialised stages involving the use of capital and the time element, is more productive than direct production carried on through current resources. Interest arises because of the higher productivity thus obtained. "Fundamentally," in the words of Briggs and Jordan, "Bohm-Bawerk's theory of interest was a marginal productive theory,"² though this fact has usually been neglected because at different times he places different emphasis on the various strands of his thought."

10. Lord Keynes' Theory of Interest—Liquidity Preference. In his epoch-making book, *The General Theory of Employment, Interest and Money*, the late Lord Keynes gave a new view of interest. According to Keynes "interest is the reward for parting with liquidity for a specified period."³

1. S. E. Thomas : op. cit. p. 281.

2. Briggs and Jordan op. cit. pp. 462-63.

3. Keynes : *General Theory of Employment, Interest and Money*, p. 167.

A man with a given income has to decide first how much he is going to consume and how much to save. The former will depend on, what Keynes calls, the propensity to consume. Given this propensity to consume, the individual will save a certain proportion of his given income. He now has to make another decision. Should he hold his resources in the form of money, *i. e.*, immediate command over goods and services, or general purchasing power, at some future date? How much of his resources he will hold in the form of ready money (cash or non-interest paying bank deposit) and how much he will part with or lend, will depend upon what Keynes calls his "liquidity preference." The smaller the desire to lend the higher the liquidity preference.

Liquidity preference of a particular individual depends upon several considerations. The question is why people hold their resources liquid or in the form of ready money, when they can get interest by lending such resources? This is due to a variety of reasons: (i) Individuals hold cash in order "to bridge the interval between the receipt of income and its expenditure." Most of the people receive their incomes by the week or the month while the expenditure goes on day by day. A certain amount of ready money, therefore, is kept in hand to make current payments. This amount will depend upon the size of the individual's income, the interval at which the income is received and the methods of payments current in the locality.

(ii) The business man and the trader also have to keep a proportion of their resources in ready cash in order to meet current needs of various kinds.

(iii) Cash is also kept in order to meet expenditure due to unexpected contingencies. It may not be possible at such occasions to recall loans, or such a recall may involve a loss, *e. g.*, securities may not be sold profitably.

(iv) Finally, cash is held by some people for speculative purposes. There may be expectation of a future rise in the rate of interest, and the prospective lender may be waiting to take advantage of such a rise.

The holding of money for the first three purposes is affected very little by changes in the rate of interest. The fourth motive is very sensitive to such changes. An expected rise of interest rates will stimulate liquidity preference and an expected fall will have the opposite effect. Generally, however, it may be said that the higher the rate of interest the lower the liquidity preference, and the lower the rate of interest the higher the liquidity preference. Higher rates of interest will increase the loss on idle balances and induce people to lend usually by investing in securities. Conversely lower rates of interest will discourage lending and encourage liquidity by sale of securities. On the other hand higher rates of interest will check business enterprise and thus reduce the level of income of people because of the falling off in investment. As a result smaller amounts of money will be required for carrying on transactions. People will

hold less money. Conversely, lower rates of interest will encourage business enterprise, and raise the level of money incomes. Hence more money will be required to carry on transactions, and people will hold more money.

Thus one may easily draw up a schedule of liquidity preference indicating the amount of money which people will want to hold at different rates of interest. Such amounts will fall with a rise in the rate of interest and rise with a fall in the rate of interest. Given such a schedule the rate of interest will be determined by the quantity of money existing at any time. The rate of interest will be such as will equate the demand for money for liquid purposes with the available supply of money. This is so because the amount of money existing at any time must be held by some people or the others. The rate of interest must be such as to induce the individuals to hold all the available supply of money. If the rate of interest is lower than this level, the aggregate amount of money that people will wish to hold at this rate will be more than the aggregate supply and the rate of interest will be pushed up. Conversely, if the rate of interest is higher than this level people will want to hold less money than there is the supply of it. The surplus cash that no one would wish to hold will bring the interest rate down. At the equilibrium position the rate of interest will be just at the level necessary to equate the quantity of money in existence with the aggregate amount wanted by the people to hold.

The same idea may be put in another way. Given the supply of money a higher liquidity preference on the part of the people will lead to their converting securities into cash. The value of securities will fall and hence the rate of interest will rise. Conversely, a lower liquidity preference will lead people to purchase securities, the value of securities will rise and the rate of interest will fall. We know that the value of fixed interest securities varies inversely with the rate of interest.

11. Keynes' Criticism of Other Theories. Keynes' theory led to considerable controversy immediately after the appearance of his book in 1936. In the first place it should be noted that Keynes' theory explained interest in terms purely of monetary forces not in terms of real forces as was done by other theories. The other theories explained interest either in terms of marginal productivity or in terms of savings. Some analysed the psychological forces behind saving. Keynes agrees that the marginal net product of capital tends to become equal to the current rate of interest. But the rate of interest is not determined by the marginal net product of capital. The latter depends partly on expectations as regards the future course of business and partly on the cost of producing capital goods. Neither of these influences can determine the rate of interest.

As regards savings, according to Keynes interest is not a reward for saving. A man may hoard his savings and earn no interest, in spite of the act of saving. Neither does interest equalise the demand for capital with the supply of savings. No doubt in a country

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the volume of saving tends to equal the value of investment goods. But this happens not through the influence of the rate of interest but through the level of incomes. If money is saved but is not invested in further production the demand for consumers' goods falls and the income of producers of such goods is reduced, and hence saving is correspondingly reduced. It is only when savings are invested that new enterprises stimulate further economic activity, increase incomes and increase further savings.

12. Criticism of Keynes' Theory. One difficulty of the theory arises from what Keynes means by "money." Money he says is co-extensive with bank deposits. In his discussion with Robertson on the other hand he seems to exclude credit from this category.

Secondly, Keynes makes the rate of interest independent of the demand for investment funds. In fact it is not so independent. The cash balances of the business men are largely influenced by their demand for capital for purposes of investment. This demand for capital being dependent upon the marginal productivity of capital, the rate of interest is not thus determined independently of the marginal efficiency of capital.

The theory is to some extent analogous with the Agio Theory of Bohm Bawerk. What Bohm Bawerk calls "prospective underestimate of the future" and Fisher calls "time preference" Keynes calls "propensity to consume." Both in effect mean preferring command over present goods as against future goods. One regards interest as a premium on present goods, the other as a reward for parting with liquidity. In substance both mean the same thing.

But while Bohm Bawerk indirectly recognises the importance of productivity of capital as a determining factor, Keynes does not. According to him current investments are too insignificant in relation to total existing capital to be regarded as a determinant of interest. They are rather determined by the interest.

On the whole, therefore, Keynes Theory is inadequate to explain interest. It takes only the monetary phenomenon into consideration and does not clearly bring out the action of real forces (of supply and demand of capital as distinct from loanable funds) behind the monetary phenomenon. Let us examine the forces acting behind supply and demand of capital.

13. Forces Behind Demand. No adequate explanation of value in any of its aspects is possible unless we take into account the forces working behind demand and supply. The Marginal Productivity Theory is the most satisfactory explanation of interest as it is of any other phenomenon of value. Marginal Productivity is the expression of the relationship between the degree of scarcity (or supply) on the one hand, and the alternative uses to which a commodity or a service can be put (or demand) on the other. Where applied to interest, or the price of the services of capital, it takes into account the supply as well as the demand.

On the side of demand capital is required for various uses, the carrying on of production being the most important. But even in production there are various avenues of productive employment which require capital. A given supply of capital distributes itself, under conditions of perfect competition, in such a way as to equalise its marginal utility or productivity in the various uses. If the marginal productivity of capital is higher in one particular use, since it earns higher returns there, capital is attracted to that use until the supply of the commodities produced by its help lowers their price and hence the marginal productivity of capital in that use. This process goes on until the returns of capital in this case is the same as in any other case.

Marginal productivity of capital, it may be repeated, is the addition made to the total production by the extra unit invested.

At any particular moment, as already said, the total supply of capital may be assumed as given. This supply is used by those who employ it in such a way as to make the marginal cost of capital and the marginal returns from its use equal. As far as any individual producer is concerned, for him the marginal cost is represented by the prevailing rate of interest. He pushes his investment of capital to such a point that the marginal net revenue earned equals the prevailing rate of interest. If the rate of interest falls he employs more capital, if it rises he employs less of it. He does not settle the rate of interest as an individual. But the total demand for capital of all those who borrow it does influence interest. If the demand for capital rises the rate of interest rises and *vice versa*. A greater demand for capital means higher marginal productivity of a given supply, and a smaller demand, lower marginal productivity.

It is in this sense that marginal productivity determines the rate of interest.

14. The influence of Supply. But what about supply? So far we took supply as given. In the short period we may assume supply to be given, since it takes some time for new supplies of capital to be available. What are the forces that determine supply of capital?

The supply of capital, as seen in an earlier chapter, depends and upon (a) Power to save and (b) Will to save. The power to save depends upon (i) total production, (ii) minimum necessary for maintaining the given standard of living, and (iii) developments in the banking system.

The will to save depends upon (i) law and order and banking facilities available in the country, (ii) expectations of rates of interest and (iii) foresight as regards provision for future for self and family.

When the saving is done not by private individuals but by public bodies and corporations the amount saved, among other things, will depend upon their policy.

Supply of money also comes from bank credit.

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The connection between the rate of interest and saving may be noted. Some people will save the same amount whether the rate of interest is high or low. They may be miserly people or very rich people. Others will not save whatever the rate of interest. They may be very poor people or spendthrifts. Still others will save more when the rate of interest is lower than when it is higher. Such are the people who want to get a certain fixed income at some future date. If the interest rate is higher a smaller investment will give them their fixed income, and if, lower, a higher investment will be necessary. Finally, there are people who save more when the interest rates are higher and less when they are lower. On the whole, however, one may say that in a country higher rates of interest stimulate savings and lower rates act in the opposite direction. If the rate of interest remains high, for a time long enough to let the forces of supply have their play, savings will be stimulated and the supply of capital will tend to increase, its marginal productivity will fall and the rate of interest will come down.

15. Forced Saving and Voluntary Saving. We have seen above that supply of capital depends on saving. A distinction is sometimes made between Voluntary saving and Forced saving. By voluntary saving is meant saving out of surplus of income over expenditure. This is the ordinary conception of saving. The people make this saving themselves. They try to increase their income and reduce their expenditure and thus effect a saving. It is all voluntary and appears to be the most natural way of saving.

But a new conception has crept in the monetary jargon of Economics. It is 'Forced saving.' This saving is associated with inflation. Inflation is effected not only by the currency authority injecting more and more notes into circulation but also by the banking system creating more credit. Banks create credit by advancing loans and 'every bank loan creates a deposit.' This artificial increase in deposits places funds at the disposal of the depositors. This is extra purchasing power created in the community. Thus whether inflation is the outcome of the policy of the currency authority or the banking system, prices rise. The rise in prices imposes a 'forced saving' on the 'fixed incomists'. Forced saving does not mean that the people save out of the increased money incomes that they get on account of inflation. That would be voluntary saving. Forced Saving simply means that the people with fixed incomes are forced to curtail their consumption due to rise in prices. It must be obvious to every body these days. Prices have risen abnormally. Is not every family of moderate means compelled to reduce its consumption of milk, ghee, cloth, etc. They must cut down their expenditure in certain directions otherwise how are they to make both ends meet? This is forced saving.

Voluntary saving can go on indefinitely without producing any harmful effects. It is a natural thing and no harm can come out of it.

Voluntary Saving is most welcome and every effort should be made to stimulate it. But forced saving is something artificial. Inflation is pregnant with dangerous possibilities. The nation resorting to unrestricted inflation is caught in a vicious circle and it is not easy to get out of it. Some European countries in the First World War got involved in it and it was their economic undoing. China is invested in it today. Inflation reduced the fixed income classes in Germany to the state of paupers. It led to 'growing poverty' as Dr. Schacht put it. Undue inflation not only brings about the collapse of the economic system but threatens even the stability of the State. Hence forced saving has to be kept within safe limits, whereas voluntary saving can go on without any limit being put on it.

We may notice another difference between the two. In the case of forced saving, consumption we know, is checked. Hence output of consumers' goods will contract. But business enterprise is greatly stimulated, more factories are set up. Therefore the output of producers' (capital) goods is increased.

Finally, forced saving (i.e., inflation) brings about a general rise in prices. Prices of both consumers' goods and producers' goods rise. But in the case of voluntary saving demand for consumers' goods contracts and that for producers' goods increases. Hence the prices of producers' goods will rise relatively to consumers' goods.

There are some people who believe that inflation (leading to forced saving) stimulates productive activity in the country and adds to its real worth. As Dr. Hayek says, " 'Forced frugality' of fixed incomes is thus compensated for in a certain degree by the amount of the addition made to the quantity of sensible wealth—of wealth possessing a value in the way of use."¹ Bentham also speaks in the same strain: "By raising money, as other money is raised.....government has in its power to accelerate, to an unexampled degree, the augmentation of the mass of real wealth."² No doubt under a planned economy 'created' money can be used as a powerful instrument of economic development, yet unbridled inflation is bound to bring disaster in its train. The prosperity will be a disguised one and a sham and no real addition to country's wealth will be made.

16. Determination of Interest. Interest is thus determined by the marginal productivity of capital. Marginal productivity is influenced both by supply and demand. To study the influence of demand we assume for the sake of convenience that supply is given. In the actual world supply and demand are both in a process of change. It is true, however, that when the period is short supply cannot be adjusted to demand easily and quickly. If the rate of interest remains at a high level supply is stimulated through larger savings. If interest is low for a long time supply is discourag-

1. Quoted by Brij Narain in Principles, P. 1945, 336.

2. Ibid

ed through greater consumption. At the point of equilibrium the rate of interest tends to be at a level where supply and demand are equalised.

Suppose we start from a position of equilibrium. Suppose a sudden increase occurs in savings and thus the supply of capital is increased. This will lower the rate of interest because the marginal productivity of capital will fall, i.e., capital will be available for use in employments in which its marginal productivity is low. The rate of interest will stop falling when it has reached a point at which the demand stimulated by its fall is just equal to the supply. The opposite will happen if suddenly there is a fall in the supply of capital. Capital having become relatively scarce will be used only for purposes in which its marginal productivity is higher. The rate of interest will go up, demand and supply will reach a new equilibrium at a higher rate of interest.

The effect of an increase in demand is the same as that of a reduction in supply and of decrease in demand the same as of an increase in supply.

So far, however, as competition is imperfect the adjustment between supply and demand will be prevented. This merely means that we shall have to deal with different markets for capital. For each different market our theory will be truly applicable.

17. Interest and the Scarcity Principle. So far we have been talking in monetary terms. But real capital consists of real resources, goods and services employed not for direct satisfaction but for promoting further production. Money only gives title to these resources. It is a mechanism with the help of which these resources can be put to alternative uses. Speaking in terms of real resources interest results from the relationship between scarce resources on the one hand and the alternative uses to which they can be put on the other. Marginal productivity of capital in this real sense is derived from the marginal utility of the commodities to the production of which capital (with other factors) lends its services. Resources in a community are limited, but since human wants are unlimited they have to be economised so that more pressing wants are satisfied before the less pressing ones. Given resources therefore are face to face with competing demands. How are they employed to meet these competing demands? They are employed in such a way as to get maximum satisfaction out of them for the commodity. The marginal utility of the commodity for the various kinds of goods and services will decide what assortments of them will be produced.

If capital resources are used for the production of one particular assortment of goods and services they have to be withdrawn from another assortment. The price that must be paid in order to withdraw these resources from the next best use represents their real cost. But that ultimately analysed comes to the satisfactions that they actually obtain. The marginal utility theory, therefore,

explains not only the values of different commodities but also of services (including the service of capital) utilised for the production of those commodities. Ultimately the rate of interest merely reflects the degree of scarcity in which capital stands in relation to other factors of production when contributing to the consumers' competing demands for various assortment of goods and services.

18. Factors Causing Changes in the Rate of Interest. In the light of the above it is easy to understand why rates of interest change. If there is a relative scarcity of capital there will be a general rise in the rates of interest. Relative scarcity may be caused by demand or by supply. In the short period most probably scarcity will be caused from the side of demand. If businessmen expect trade revival or higher prices and profits, short-term rates of interest will rise, due to greater demand for loans. The value of industrial shares will rise while the price of fixed interest securities will fall thus increasing their yield. The same results will follow if new inventions open up new avenues of profitable employment of capital.

Short-term rates may also be raised by influences working on the side of supply. Bad harvests for instance may create scarcity of capital, a rise in the income tax may reduce people's capacity to save, a shortening of the working day by reducing production may have the same effect.

The same is the case with influences lowering the rates of interest in the short period. Expectations of a trade depression will discourage new investment, the demand for fixed interest bearing securities will rise, their value will go up and yield will fall and interest rates will fall. As regards supply new inventions may economise capital. "Bumper" harvest may also have the same effect of increasing supply of capital and lower short period rates. Similarly, a general increase in wages may reduce the share of capital or (rate of interest) in the national dividend.

Short period rates are also influenced by political factors. A general sense of political insecurity will discourage enterprise and demand for funds hence the rate of interest will be lowered. An international crisis in this way will cause rates of interest to fall sharply. But rates of interest may be raised if such a crisis reduces the capital offered in the loan market.

So far the short period rates. What about long period rates? We have already seen that changes in short period rates cause corresponding changes in long period rates, due to movements of funds from short period to long period markets or *vice versa*. Long period rates, however, are largely affected by long period factors or influences such as changes in the size of the population, changes in the habits of savings of the people, etc. Other things being equal an increase in population tends to raise interest rates and a decrease to lower interest rates in the long run. A higher expectation of life stimulates savings and thus tends to lower interest rates and

vice versa. Uncertainty about the future discourages savings and tends to raise interest rates.

19. Economic Progress and the Rate of Interest. Economic progress connotes technical progress, increase in the volume and range of production, rise in the standard of living, etc. With economic progress and higher level of money incomes, demand for goods is bound to increase and so the demand for capital thus it would seem that the rate of interest must rise as we economically advance.

But this is not so. With economic progress both our power to save and will to save are considerably increased. The surplus of production over consumption is increased, the development of banking and insurance companies provide safe and remunerative channels of investment; and the security of life, and property and increase in foresight due to educational advance augment the various motives for saving. The cumulative effect is that the supply of capital is increased much more than the demand for it. Hence the rates of interest have tended continuously to fall. In advanced countries like England and America, the rate of interest has fallen to $\frac{1}{4}\%$ or $\frac{1}{8}\%$ on certain types of loan.

As a country advances the habit of hoarding is discouraged and the desire to invest has increased. As the supply of capital made available for investment increases, its marginal productivity and hence the rate of interest falls.

The result of the fall in the rate of interest has been to reduce the incomes of the moneyed classes from interest. The reduction of the capitalists' share in the national dividend has left a greater margin for distribution among other factors of production. Lower capital cost cheapens production which benefits the community in general.

20. Can there be a Zero Rate of Interest? It was Mill who visualised the possibility of an extremely low rate of interest due to greater and greater accumulation of capital as civilisation advances. Some economists have asserted that interest may fall to zero on account of this tendency.

Theoretically a zero rate of interest can be conceived. As time goes on people's power to save and will to save tend to increase. The former because of the rising productive capacity and the latter because of greater foresight and the tendency to discount the future at a low rate among the more advanced people. A stage can be imagined in which capital accumulation may outstrip the demand for capital, thus lowering the marginal productivity of capital to zero even making it negative, i.e., people may even pay somebody to take care of their savings.

It is, however, extremely improbable, if not actually impossible, that such a stage will be reached. In the first place, the demand for capital will increase with the increase in population and the increase in the variety of people's wants. We have seen that individual

wants are satiable but human beings develop new wants when old ones are satisfied. Moreover, with technical progress it is likely that the demand for capital will increase, since more and more round about methods of production will be employed. It is true of course that new inventions may substitute methods which economise capital; this may lead to a fall in the rate of interest. But the marginal productivity of capital will still be positive and hence there will always be a positive rate of interest.

Looking from the side of supply also we come to the same conclusion. Some people may save even if the rate of interest is zero or even negative. But most of the savings will be seriously reduced if there was no compensation for postponing consumption, thus creating relative scarcity of capital.

There is thus no possibility of the rate of interest falling to zero.

21. **The Necessity of the Rate of Interest.** So much for the future of interest. What about the present? Why should interest be paid at all? In the Middle Ages money was regarded as barren and hence interest, it was thought, was not justified ethically speaking. Some people even now favour the abolition of interest in every form. Without entering into ethical controversies let us look at the matter from the economic point of view. Is payment of interest justified on economic grounds? Since capital is productive we can say that interest can be paid. But should it be paid? What will happen if it is not paid? We have already answered this question. We can enforce a zero rate of interest only if capital loses its character of scarcity. As it is capital is scarce relatively to demand for its services. There are so many alternative uses to which capital can be put. It is the rate of interest which determines to which uses capital should be put. Some uses have to be sacrificed in order to supply capital to more pressing uses.

Even in a socialist society interest cannot be abolished even though it may not be paid to private individuals. Even there through its instrumentality priorities regarding the use of scarce capital resources for various possible employments will have to be decided. The order for priorities in a socialist State will probably be different from the one in a capitalist society, but interest will perform its function all the same. It has the same function as the function of price, i.e., it restricts demand to the supply available. It enables capital to be apportioned between competing demands of alternative uses. Through its instrumentality those uses which promise the highest future returns receive the first consideration. Of course the criterion of the highest future returns will differ in a capitalist society from a socialist society. In the former, expectations of profits for private entrepreneurs and in the latter the conception of welfare on the planning authority, will determine the priorities in investment. You cannot abolish interest, you can socialise it if you socialise capital. As long as capital

is not socialised interest must be paid to keep up the stream of capital accumulation. Interest therefore must be paid, because the borrower can pay it and the lender must be paid.

✓ **22. Interest and Rent.** We are now in a position to notice some differences between interest and rent.

(i) With the advance in civilization and economic progress, the rate of interest tends to fall whereas rent tends to rise. It is due to the fact that the supply of capital is continuously increasing and tends to outstrip the demand for it. But the quantity of land is limited and cannot be increased, whereas demand for it goes on increasing as population increases. Hence rent tends to rise and interest tends to fall.

(ii) On account of the great variations in fertility and situation the rents of lands vary widely. These differences in qualities of land are permanent. Greater the competition, more marked will be the differences in rents. On account of immobility of land, it cannot be easily diverted from one use to another. Hence inequalities of rent tend to be perpetuated.

Interest, on the other hand, tends to equality, only the rates of gross interest differ due to factors like risks and inconvenience. Capital is much more mobile and differences in pure interest, if any, tend to disappear on account of competition.

(iii) There is no rent land but there cannot be no interest capital. Capital is man-made and has a definite supply price. Unless this price is paid it will not be forthcoming. Every portion of capital must bear interest. But there may be some lands too poor to yield any rent or surplus. Land is nature's gift and cannot be withdrawn even if it earns no interest.

23. Interest, Rent and Quasi-rent. There are economists who deny that there is any difference between rent, quasi-rent and interest. Their contention is that there is nothing peculiar about land or at any rate its peculiarities are exaggerated. (a) Land is not the only free gift of nature. There are mineral ores too for instance; (b) There are other things, besides land, which are limited; (c) Land is not so 'indestructible' as is supposed. Its chemical and other qualities are being constantly exhausted and replenished by human effort; and (d) Differential element is present in other factors of production also. It is thus argued that incomes from investments whether in permanent things like land or in semi-permanent things or in perishable articles are absolutely alike from the point of view of the working of economic principles. The principle of scarcity is the basic principle which is applicable in all cases of determination of value.

But these similarities should not blind us to some fundamental differences between interest, rent and quasi-rent. The chief difference lies in the reaction on the supply of the factor of changes in its remuneration. Rent may rise or fall but the supply of land

business enterprise is discouraged, the demand for capital contracts and the rate of interest will fall.

Hence we may conclude that the rate of interest varies inversely with the changes in the value of money and directly with the changes in the price level.

25. Consequences of Changes in Interest Rates. Rise and fall in the rates of interest produce several repercussions. Briefly, following are some of the consequences of the rise in the rate of interest :—

(1) A rise in the rate of interest makes the holding of stocks of goods costly. Speculators and middlemen are discouraged ; the demand for raw materials and semi-finished goods contracts ; consequently their prices fall.

(2) Cost of constructions also goes up when interest rates rise. If the house rents do not also go up, building activity will be discouraged. Unless the rates of profit go up, the demand for factories will also go down.

(3) When rate of interest rises, the capitalists will borrow less unless bigger profits are going to be made. This will check industrial and commercial enterprise.

(4) Rise in the rate of interest will stimulate saving and in course of time increase the supply of capital.

(5) Prices of bonds will go down, because a smaller sum invested at a higher rate will yield the fixed interest of the bond. (The relation between the value of bonds and the rate of interest has been explained fully in Section 4 : Different forms of Investment.)

Fall in the interest rates will have the opposite effects which are given below:—

(1) The prices of fixed interest bearing bonds will go up.

(2) Saving will be discouraged.

(3) Speculation will be stimulated and demand for raw materials and semi-finished goods will go up as the cost of holding stocks is now less.

(4) Commercial and industrial enterprise will be stimulated. But it is well to remember that a mere fall in the interest rates will not do it. There must be good prospects of making profits otherwise low rates of interest will not tempt the business men to borrow. You may take the horse to water, you cannot make him drink.

(5) Building activity will be encouraged.

(6) If interest has fallen—because of increased voluntary saving, demand for consumers' goods will contract and that for producers' goods will increase. Factors of production will move into producers' goods industries.

(7) If the low rate of interest is due to the increased supply

CHAPTER XXX

PROFITS

1. **Introduction.** Profit is the reward of the entrepreneur, rather of the entrepreneurial functions. The study of profits is full of difficulties. The difficulties arise mainly because of two reasons. Firstly, in the case of rent, wages and interest, it is easy to apply the usual law of supply and demand. The owner of each factor is the seller and the entrepreneur, the buyer of their services. Who buys the services of the entrepreneur? This difficulty, however, partly disappears when we realise that, ultimately, the services of all the factors are "purchased" by the community. The only difference is that while the community acts through the entrepreneur in the case of land, labour and capital, in the case of the entrepreneur it is the competition among the entrepreneurs themselves that ultimately decides the rewards going to this particular factor of production. The second difficulty arises from the fact that all that an entrepreneur receives (his gross receipts minus the cost of the hired factors) is not his profit. Even after you have allowed for the return for the factors (land and capital) owned by the entrepreneur himself and arrive at his "net" receipts the difficulty is not over. Some of these net receipts are the return for the entrepreneur's "labour" in a wide sense of the term.

The nature of this difficulty becomes clear and when we realise that in the modern world business units vary from the "one-man-business" run on a small scale in which one man is the entrepreneur, capitalist, manager, etc., all rolled in one, to huge establishments run by joint stock companies in which all these functions and many more are split up and are performed by different individuals. "It is difficult to frame a simple theory of profits which would include the small independent trader, the large employer, the small holder and the shareholders of a joint stock company, while excluding responsible managers."¹

2. **Analysis of Gross Profits.** The best way to understand the true nature of profits is to analyse the gross income of the entrepreneur into its various component parts. Gross profit stands for the total earnings of the entrepreneur, not necessarily for the entrepreneurial functions only. It is a mixture and is composed of several elements of which Pure Profit is only one. Pure profit, however, is the return on the entrepreneurial functions only. From the total receipts of the business must be taken out what has to be paid to the various factors of production engaged on contract basis. The rent of land, the wages of labour, and interest of capital, has to be deducted. What remains is the gross income or gross profits of the business. These again can be analysed as follows:—

(i) *The interest on the entrepreneur's own capital invested in the*

1. Briggs and Jordon, op. cit. p. 406.

business is often confused with profits. This is not profit because the entrepreneur could earn this interest by lending his capital. We must therefore make a deduction at the current rate of interest.

(ii) *Rent of land owned by the entrepreneur* also should not be counted as profits. He could earn his rent by giving his land on rent to a tenant, a deduction must be made at the current rate of the rent of land similarly situated and possessing other advantages.

(iii) *The entrepreneur's wages of management or superintendence.* This is the return for the work done by the entrepreneur as manager, and could have been done by him on salary basis for another firm. He must be allowed his salary, which is the wages rather than profit.

The above three elements, strictly speaking, are not the reward of the entrepreneur as an entrepreneur; but as capitalist, landlord and manager. These he could earn without setting himself up as an entrepreneur.

(iv) *The reward of the entrepreneur as risk taker.* The function as a risk taker must be performed by the entrepreneur himself. Certain risks, however, are insurable, e.g., risk of accident, fire and marine, etc. But many risks cannot be insured as we shall see and these must fall on the entrepreneur.

(v) *Gains arising to the entrepreneur for the special ability as a superior bargainer* with labourers, capitalists, landlords, suppliers of raw materials and consumers—all those with whom he has dealings.

(vi) Then there are *monopoly gains*.—These are due to imperfect competition which enables the entrepreneur to charge higher prices or to pay lower rewards to the factors hired by him and thus increase his profits.

(vii) *Conjunctional gains* are another element. These arise due to favourable circumstances or pure luck, e.g., outbreak of a war giving high profits to producers of essentials of war and even to other producers. During the war recently ended, many entrepreneurs made enormous profits due to war demands and high prices in India and elsewhere.

The difficulty in the conception of profits arises from the fact that different writers do not include identically the same items or do not emphasise them in a uniform manner in their study of profits. For instance some American economists like Walker, employ the term profit only to mean the net gain of the employer employing no capital of his own. On the other hand some English economists, like Marshall, include in the term profits, interest on capital owned by the business man in addition to earnings of risk taking and of management.

The tendency among modern economists is to accept the American view of profit as being the reward of purely entrepreneurial functions, which cannot be performed by paid employees. These functions consist of risk taking and bargaining ability supplemented

by monopoly and conjunctural gains, if any. The income from risk taking and gains from bargaining are regarded by some economists as "pure profits" of the entrepreneur as against the "gross profits" which include all the items enumerated above. Pure or Net profit is "the amount that accrues to the entrepreneur for assuming the risk inseparable from all business under the system of production in anticipation of demand."

3. Pure Profit. Let us pursue the idea of pure profits a little further. A pure organizer is essentially creative, because through organization additional production is made possible which otherwise would not take place. His success depends upon two groups of conditions : (i) The number and quality of the available factors of production, their price and the increase in their productive power when combined ; and (ii) the state of demand for the commodity concerned. Though supply of the factors may be relatively fixed their prices may vary greatly. The demand for commodities is subject to considerable variations. The best organiser is one who can obtain the most efficient combination of the factors to produce commodities in such quantities as to give him the maximum profit.

This is not an easy task. The demand is not a fixed quantity. The employer does not produce for the present demand but for future demand also. He cannot accurately gauge the amount of future demand which is subject to so many uncertain influences. In some cases demand has to be created. Any serious mistake in calculating future trends in demand may ruin the entrepreneur. Thus arises the element of uncertainty. Such uncertainties have increased in modern times enormously as compared with medieval times. This is mainly due to two factors. First, the process of production has become more roundabout and hence lengthy. Secondly, the market is much wider and is exposed to a much greater variety of influences.

On the other hand, the difficulties of organisation are not so great in practice as they appear in theory, because business methods get standardized. Experience of old hands is a guide to new enterprises. New experiments are made, but due to standardised methods of combining the various factors, the chances of failure are not as large as would appear at first sight. The problem is more of adaptation to new conditions rather than bringing into existence a ready-made business. A good and experienced organiser can make such adaptation comparatively easy. Much of the organisational work thus can be delegated to paid employees. But an exceptionally good organiser may be able to introduce a new combination of factors which is much more productive than the old one. He will thus enjoy extra gains until the new combination is adopted by the rivals. If he is fortunately situated as regards demand, or he is alert enough to take advantage of changes in demand, he may earn exceptionally high profits. Such profits are of the nature of rent, because they are a differential gain due to higher ability of an entrepreneur as compared with the one who

earns the normal wages of management and no pure profits in this sense. Thus pure profits are a surplus over normal wages of management and is the reward for the superior ability of an entrepreneur for taking risks of future variations in demand, his ability to try successfully new and more profitable combinations of factors of production.

"It (pure profit) is a payment made exclusively for bearing risk. The essential function of the entrepreneur is considered to be doing something which only he can do. This 'something' cannot be the task of management, for managers can be hired, nor can it be any other function which the entrepreneur can delegate. Hence it is contended that the entrepreneur receives a profit as a reward for assuming *final responsibility*, a responsibility that cannot be shifted on to the shoulders of any one else."

The marginal entrepreneur earns ordinary or average profit. But the super-marginal entrepreneurs make extra-profits, i.e., something over and above what the marginal entrepreneur makes. These extra or exceptional profits are 'rent of ability' and have been called 'pure profits'. The profit made by the marginal entrepreneur forms part of price but the extra profits made by superior entrepreneurs are of the nature of rent. They are surplus above costs and do not enter price. Like rent they are the effect and not the cause of price. These pure profits tend to disappear by force of competition.

4 Profits, a Reward for Risk-bearing. It is not always a lure of profit that tempts a business man to launch a venture. There are people who value independence more than anything else. Rather than receiving orders they would like to give them, even if there is the prospect of earning a little less. They do not mind the risks involved in the business.

But most of the people do mind the risks which make them hesitate to take the plunge. Greater the risk higher must be the expected gain in order to induce them to start the business. Some risk is inherent in every business. All businesses are more or less speculative and unless the risk-taker is amply rewarded, business will not be started. Normal return on his capital cannot satisfy the entrepreneur. He must get something over and above it to induce him to take the risk. As risk acts as a great deterrent the supply of entrepreneurs is kept down and those who do take the risk earn much more than the normal return on capital. Hence profits are regarded as a reward for risk-taking or risk-bearing. This theory of profits is associated with Hayley's name.

As against this there is the view that though profits do contain some remuneration for risk-taking, yet the high profits made by the entrepreneurs cannot in their entirety be attributed to the element of risk. They are not at any rate in proportion to the risks undertaken. On the contrary it is pointed out by Carver that profits arise

not because risks are borne, but because the superior entrepreneurs are able to reduce them.¹ We might say with an appearance of a paradox that profits are made not because risks are borne but because they are avoided and not borne.

But it cannot be denied that a great deal of pure profit is the reward for risk-bearing, whether due to trying new combinations of factors or due to changes in demand for the commodity in question. Let us understand more fully the nature of this element of risk.

We have already mentioned that pure profits contain the reward for risk-taking. But as Prof. Knight says all types of risks do not form an element of profit. Risks are of two kinds. Some risks can be foreseen or anticipated, and hence provided against, or, technically, they can be insured. Such risks are calculable because they can be measured by the laws of mathematical probability provided the number of instances considered is sufficiently large. For instance, by the study of statistics of past mortality, we can predict almost with certainty the proportion of people that will die during the next year or years in a given age group. In the same way accidents can be predicted and hence insured. The whole insurance business (and banking business) is run on this principle of uniformity when large aggregates are involved. Such risks are assumed by insurance companies and can be easily escaped by the entrepreneur. The insurable risks are provided against. They are included in supplementary costs. They are thus part of costs and not of profits. Pure Profits are surplus above costs.

But there is a second class of risks that cannot be foreseen and hence cannot be insured. Variations in the demand for a commodity may take place due to hundred and one factors like changes in tastes, fashions, seasons, political factors, etc. This makes every business more or less a speculative adventure. The greater the element of speculation the higher must be profits to attract business men to undertake such enterprises. It is for assuming unforeseen, non-determinable and unpredictable risks that the entrepreneur is rewarded with profits.

5. Profits, a Reward for Uncertainty-bearing. According to Prof. Knight it is uncertainty-bearing rather than risk-taking which is the special function of the entrepreneur and leads to profit. We have seen that there are certain risks which are foreseen and provided against. Risks of death and of accident like fire and ship sinkings are statistically determinable. Their incidence is measurable. The insurance companies undertake these risks in return for premia paid to them. The payments of these premia are included in the cost of production. The entrepreneur gets no profit on account of these risks. Hence risk-taking is not the function of the entrepreneur but of the insurance companies.

As for the other risks which are unforeseen and unpredictable, Knight will not call them risk but uncertainty. The term risk is

applied to those dangers which are known and foreseen. The entrepreneur does get a remuneration for bearing uncertainties (unforeseeable risks) and nothing for the risks which have been foreseen the incidence of which is on the insurance companies. Just as waiting (capital) is a factor of production, uncertainty-bearing has also been given the status of a factor of production.

Like other factors of production uncertainty-bearing has a supply price i.e. unless a certain return is expected, no entrepreneur will be induced to face the uncertainty. The supply of this factor, uncertainty-bearing, depends on the temperament of the entrepreneur, the total resources at his command and the proportion of these resources he is inclined to expose to uncertainty. A rich entrepreneur of a bold and venture-some spirit, who has made up his mind to invest a big proportion of his wealth, can take greater uncertainty. A greater gain is necessary to induce an entrepreneur to expose a larger proportion of his capital than when only a small proportion is exposed.

It must be borne in mind that it is the combination of uncertainty-bearing and capital which brings a reward to the entrepreneur in the form of handsome profits. Capital alone by itself is inert and lifeless and uncertainty-bearing without capital has no meaning. It is only capital which can be exposed to risk. And this combination is a rare one. An entrepreneur of a speculative turn of mind may have little capital at his command. On the other hand, there may be an extraordinarily rich man but he may be a wiser and timid. Perhaps his heart would sink if he were to expose some of his wealth to the risk of business.

This theory of uncertainty-bearing as a cause of profit has been criticised on the following grounds :—

(1) Uncertainty is not the only factor that limits the supply of entrepreneurs. Lack of funds, lack of knowledge, lack of opportunities and the presence of economic friction are some of the factors that restrict the supply of entrepreneurs.

(2) Uncertainty-bearing is not the sole function of the entrepreneur. The profit that he gets is also the reward for other services that he renders, e.g., initiating, co-ordinating, bargaining, etc.

(3) Uncertainty-bearing cannot be elevated to the status of a factor of production. It is an element of real costs which mean exertion, abstinence, sacrifice, etc., as distinguished from money cost. Cost is not generally measured in terms of real cost. We know that capital is a factor of production but not the abstinence needed to save capital. Hence uncertainty-bearing cannot be treated as a separate factor. By discussing uncertainty nothing further is meant except that where in business there is greater uncertainty, more profits may be expected.

6. Dynamic Theory of Profits. This theory is associated with the name of American economist J. B. Clark. He says that in a

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static world where the size of the population, the amount of capital, the quality and quantity of human wants, the methods of production, the organisation of business, etc., remain the same, profits tend to disappear under the force of competition. Profits represent the difference between selling price and cost. It is a surplus above costs. But if competition works in a frictionless manner, the surplus will vanish. In a stationary state everything is known and knowable. There is no risk and no uncertainty, hence no profits.

But we are not living in a stationary State. Ours is a dynamic world and some changes are constantly taking place. The clever entrepreneur foresees these changes. He is a pioneer, somehow by invention or otherwise he lowers the cost and makes a profit. But others will soon follow him and will adopt his methods. Their competition will either raise the costs or lower the selling price so that the gap between the two is bridged and profits disappear. But the changing world offers limitless opportunities to the far-sighted, daring and clever entrepreneurs to make profit by turning the facts of the situation in their favour. It is only because the world is dynamic that it is possible for them to keep the lead and reap the profits. In a static State profits will disappear and the entrepreneurs would only earn wages of management.

Prof. Knight, however, is of opinion that only those changes which cannot be foreseen and which cannot be provided for in advance will yield profits and not others:

7. Monopoly and Profit. So far we assumed that the employer is working under conditions of competition. When competition is either absent or is imperfect, the entrepreneur can make extra gains by restriction of supply of his commodity or demand for the factors, if he has a monopoly as purchaser of such factors. This element is due in a way to the superior bargaining position of the entrepreneur either as the seller of his product or as the buyer of the factors of production or their services. We have seen that pure monopoly is as rare as pure competition or perfect competition. In the actual world the typical cases are of imperfect competition. And, therefore, the element of monopoly gain is not as rare as one would think. In fact such an element will be found almost in all profits.

Competition among the entrepreneurs as employers is imperfect mainly because in the modern world while due to complexities of business the demand for highly efficient entrepreneur, who can assume responsibility in dealing with uncertainties is great, the number of such people available is relatively very small. Hence their relative scarcity to the other factors of production enables them to appropriate a larger share of the national dividend than they would do if they were not so scarce.

8. Profits and Wages. The connection between profits and wages can be looked at in two different ways. One view, that of the socialists, is that profits are simply deductions from the produce of the workers' labour. According to this view profits are not justified

because they are earned at the expense of the wage earners. The second view is represented by Prof. Taussig. He regards profits as simply a particular kind of wages.

According to the socialist view of profits as expounded by Karl Marx profits arise because less is paid to the labourer than the value of his work. This is a deduction from Marx's famous theory of surplus value already considered by us. The argument essentially rests on the acceptance of the labour theory of value, which also we have criticised at another place. Here it may be added that under perfect competition rates of wages for the same type of labour tend to equality in the same industry. The same wages are paid by the employer who earns no profits as by the one who earns high profits. The superior employer earns high profits not because he pays lower (this he cannot do under competition) but because on account of his superior organisational ability and uncertainty bearing powers; he can produce at lower cost than his inferior rival. This greater net return constitutes his profit, the reward of his superior ability.

Now consider Taussig's view that profits are merely wages for a special kind of labour. "Profits," says Taussig, "are best regarded as simply a form of wages." The business man's income is irregular no doubt because it is a surplus after meeting expenses of production. But this income is not due to mere chance. It is the outcome of the exercise of special ability, a sort of mental labour not much different from the labour of lawyers and judges. "Moreover," Taussig continues, "salaried posts of management have a very wide range—foremen, superintendents, general managers, presidents. A process of transfer is constantly taking place between the salaried ranks and independent business managers. Both are affected by causes of the same sort." The theory of wages, therefore, "should consider the remuneration of every sort of labour....of such independent workman as well as.....of a hired labourer."¹

Our consideration of the nature of profits has shown why this position of Taussig cannot be accepted. There are fundamental differences between wages and profits. Thus :—

(i) Assumption of risk and uncertainty is the predominant function of an entrepreneur. Profits are essentially a reward for this function. The labourer does not take the risk of losing his job if the industry fails, but his reward or wage is primarily for the labour performed by him not for the risk, which is insignificant as compared with the risk taken by the employer.

(ii) There is much greater element of chance gains in profits than in wages. Wages are fixed and stipulated incomes while profits are irregular and uncertain due to the factors of chance and uncertainties involved. Wages thus are "earned incomes" in a much more real sense than profits.

(iii) Part of profits, and in some cases a major part, is due to imperfections of competition. Under imperfect competition, while

1. Taussig, Principles, Vol II.

profits tend to swell, wages tend to be depressed, for reasons already noted.

Profits thus are distinct from wages. How earnings of management are distinct from profits becomes clear if we consider the working of a joint stock company. Here profits are arrived at after payments have been made for all managerial work. Those who earn these profits, i.e., the ordinary shareholders, perform no other function but that of risk-bearing, rather uncertainty-bearing. Their earnings can by no stretch of imagination be regarded as wages.

9. **Is Profit a Kind of Rent?** Another view of profits makes them analogous to rent. The Rent Theory of Profit as it may be called was first propounded by the American economist, F. A. Walker. He was the first to introduce distinction between a capitalist and an employer into English economic theory. An entrepreneur need not be a capitalist. He is a person who undertakes a business without using any of his own capital.

Walker regards profit as rent of ability. Just as there are different grades of lands there are different grades of entrepreneurs. The least efficient entrepreneur, who must remain in the field of production to meet the current demand, just recovers his cost of production. Above him are superior entrepreneurs of varying degrees of ability. Just as rent arises because of the differential advantage enjoyed by superior land over the marginal land, profit also is the reward for differential ability of the entrepreneur over the marginal entrepreneur or the no-profit entrepreneur. Profits are thus like rent and like rent do not enter into price. Wages of management are not a profit. The marginal employer only earns the wages of management part of and no more. A slight unfavourable turn of prices or costs and he would prefer to work as an employee rather than an employer. Wages of management thus must be paid to keep up the given supply of entrepreneurs. Such wages thus enter into price.

The theory possesses the same weaknesses as we considered when criticising Ricardo's theory of rent. The employer who will leave the business with a slight unfavourable turn of events is not necessarily the least efficient. He may be higher up in the scale and may be attracted by more profitable alternative employment. The theory, moreover, does not explain the real nature of profits; it merely provides at best a measure of profits. It is wrong to say, again, that profits do not enter into price. They may not in the short period but they must in the long period. The entrepreneur performs the essential function of risk bearing and unless the price of the commodity is high enough to compensate the employer the supply of employers will decrease until the price rises high enough to pay for the risk-bearing service. Some employers may be earning high profits but others meet with high losses. When the average is taken over a long period the so-called surplus tends to disappear. Finally, the theory even fails to explain the size of the profit. The differential gain is due to scarcity of superior employers but why

does this scarcity arise? In the case of land, scarcity is due to the natural limitations. In the case of entrepreneurs there are no such limitations. The theory of profit must explain the cause of such scarcity.

Thus, there is no doubt a differential element in profits as in rent, superior entrepreneurs earning higher profits. But the analogy ends here. There may exist no-rent land but there cannot be no-profit entrepreneur. Rent may not enter price but normal profits do.

10. Normal Profits. Some writers introduce the concept of normal profits. Surpluses that arise on account of uncertainty and imperfect competition are the phenomena of dynamic or changing conditions. As Prof. Knight points out, normal profits belong to the equilibrium state, and to the state in which changes are taking place which can be anticipated and calculated. Of course it is difficult to imagine a world entirely devoid of change. But we can have societies, specially old established societies, in which conditions are relatively static and business methods have become of more or less a routine nature.

In an equilibrium state or a static society resources are more or less fixed and have attained such a distribution between various industries that there is no motive for transferring them from one employment to another. Uncertainty, therefore, would be at a minimum and competition perfect. Under such conditions pure profits will tend to disappear and the entrepreneurs will only earn wages of superintendence. Normal profits, therefore, practically come to earnings of management.

In a progressive state also similar results can follow, provided competition is unrestricted and changes can be anticipated. But since changes are not uniform entrepreneurs in some industries may be able to make higher profits than in others.

Surplus profits can arise in a dynamic world even though the factor of uncertainty is absent, provided the period is short. But this will only be a temporary condition. Industries yielding profits higher than the normal will attract entrepreneurial ability and other factors of production. The rate of profits in such industries will tend to fall. In the industries which are being depleted of such factors, profits will rise until the normal level of profits is established. But normal profits in a dynamic world need not necessarily equal to the wages of a hired manager even though the factor of uncertainty is absent. The very fact that change exists, even though it can be anticipated, means a heavier responsibility on the entrepreneur than in a purely static state. To keep up the supply of entrepreneurs, therefore, inducement must be given to take up such responsibility. But this additional payment over and above the wages of management will be kept within narrow limits by the forces of competition.

In a dynamic world, with element of uncertainty in existence even under competition, profits can be kept permanently above the

normal level. Abnormal profits also can permanently arise where the supply is in the hands of a monopolist and demand is inelastic. This will be so irrespective of the fact whether uncertainty exists or not.

It should be noted, however, that uncertainty in its turn is not something constant. There are degrees of uncertainty. The greater the degree of uncertainty the higher must be the profits to compensate the entrepreneurs for bearing its risks.

11. Do Profits Tend to Equality? Here again we cannot give a uniform answer. It will depend upon the conditions that prevail. In a state of equilibrium profits in the sense of wages of superintendence will be equalised. Pure profits will disappear. In a state of society in which change is present but the factor of uncertainty is absent profits will tend to equality about the normal level as already explained. Differences, however, will not be entirely absent because of the difference of ability. But these differences will be kept narrow by the force of competition. On the whole one may say that the greater the routine character of an industry the greater the tendency of profits to equality, provided the period is fairly long and competition unrestricted. In the short period, however, inequalities can exist.

But when we are dealing with a changing society in which the factor of uncertainty is prominent, there is no tendency towards equality of profits even in the long run. Here profits may show considerable variations. The differential element of profits under such conditions become obvious. But as in the case of land it is a secondary not ultimate phenomenon. The differential element exists because exceptional talent capable of successful handling of business under conditions of uncertainty is scarce. This scarcity is due to the conditions of supply of entrepreneurs as a class. Let us investigate these conditions.

12. Forces Controlling the Supply of Entrepreneurs. Why are people attracted to the entrepreneur's profession? For one, there is independence which people prefer to working under someone. Secondly, there is the lure of the possibility of high profits. To counterbalance these attractions there is the risk of losing your all and becoming bankrupt. Then the element of responsibility does not appeal to all men. In most cases, moreover, a knowledge of trade conditions is essential. Employers are thus largely recruited from a small class of people who have grown up in the recruited atmosphere.

There are mainly three ways in which a person may become the head of a business: (i) Advantage of birth and heredity may fit him for this purpose. He may grow up in an atmosphere of business and learn the secrets of the profession from the father or a relative; (ii) An employed manager may deem it worth while after learning the ways of the business to set up as an independent employer; (iii)

explained the reasons why entrepreneurs are scarce and why it is not easy to increase their supply. The demand for entrepreneurs, especially entrepreneurs of exceptional ability, is great in the modern conditions of production. The marginal productivity of entrepreneurs is high, therefore profits are high. The greater the factor of uncertainty, the greater the scarcity of employers of ability high enough to make a success of business, the higher the profits.

The only difference in the application of the theory of marginal productivity to entrepreneurs as compared with other factors is that here the forces of competition work directly, while in the case of other factors they work through the employer. The ultimate substance is the same. It is the community's competing demands that have to be satisfied and thus entrepreneurial ability has alternative uses. Forces of competition tend to equalise the profits of employers of equal ability.

The theory, however, cannot be applied in such a clear-cut way to profits as it applies to other phenomena of value. This is due to the fact that the employer performs a complex set of functions and the element of uncertainty refuses to be standardised. Moreover, employers cannot be increased or decreased in minute doses since they constitute a large unit. Withdrawal of one unit may disorganise the whole business. It is thus difficult to measure the marginal net product of the services of this factor of production.

14. Conclusion Regarding the Determination of Profits. In conclusion about the determination of profits we may say that no one theory is adequate to explain profits. Different views emphasise different aspects of the functions of the entrepreneur. The real difficulty arises from the fact that profit is not a homogeneous income. It is a composite income due to the composite character of the function of the entrepreneur, e.g., he takes risks, bears uncertainty, plans, initiates, makes decision, etc. No one of them can fully explain the true nature of profits. Mere analysis of profit into its component parts according to the various functions for which they are a payment also cannot explain the emergency of profits. The time theory must explain why organising ability is so scarce, because it is this scarcity in the face of demand for exceptional entrepreneurial ability that leads to the emergency of the surplus called pure profits in the modern world of uncertainty and change. Such a theory must explain why the qualities essential for a successful entrepreneur (imagination, organising ability, judgment, courage, etc.) are so scarce. How far this limitation is due to natural causes and how far to environmental factors? The theory must explain exceptional profits due to conjunctural gains and the element of monopoly. Moreover, monetary factors also cannot be ignored. Nor can we ignore the influence of the present social stratification of society which restricts mobility and opportunity. Due to these complexities no comprehensive theory of profits has yet been expounded. In a general way the marginal productivity

accept a thing either because they are sure that others will accept it from them on the same terms or that they can put them to some alternative uses. Cheques and bills of exchange are not universally accepted, hence they are not money. Wheat will not be universally accepted by people beyond certain quantities. Wheat is a bad money material. Gold and silver are generally accepted because they have alternative uses which give them value apart from being money material. Currency notes are accepted because people are sure they can pay them back in their purchases or in the last resort to the issuing authority in return for values received, etc. General acceptability also depends upon stability of the value of the money material as we shall see below.

(b) *Portability*. The material used should be easily portable. In other words it should contain large value in small bulk. Coal, for instance, is not a good material for money while gold, silver and paper are.

Modern post offices and banks help greatly in the movement of funds from place to place. You deposit money at one place and withdraw it at another. The actual money deposited rarely moves.

(c) *Cognizability* is another essential quality. Cognizability implies the quality of being readily recognised. If you have to carry a special apparatus to test the genuineness of the money material considerable inconvenience will be caused. Circulation in the form of coins and currency notes of recognizable designs meet this difficulty.

(d) *Homogeneity*. The material should be of uniform quality. If the quality is not uniform it will not contain the same value in the same bulk.

(e) *Divisibility*. The material should be capable of being divided into smaller parts without losing value. For instance a diamond when cut into two pieces does not have the same value as before division. Cattle cannot be divided at all without ceasing to be cattle. Gold and silver can be thus divided. A tola of gold or silver has the same value in whatever number of parts they may be divided.

(f) *Durability*. Perishable commodities are not good materials for money. They lose their value after a time. Animals for instance may fall ill, get weak or die. The same applies to perishable goods.

(g) Most of all money should be comparatively stable in value since it has to serve as a standard for measuring other values. Gold and silver again are more stable in value than other commodities. Since they are durable large stocks of these metals are available, though not large enough to make them very cheap. The annual production forms a small proportion of these already existing stocks and thus affect their value very little.

The stability of the purchasing power of paper depends upon the artificial control on its issue. A well managed paper money

A few words now may be said about each of these kinds.

14. Coins and Coinage. Metallic currency or coins are pieces of metal of particular fineness and weight with both sides stamped with the symbols of the government of the country. The edges of coins of higher values are usually milled to save deterioration, and as a means of detecting any meddling with the coin. Our silver rupee, prior to the present war, consisted of 180 grains of silver, $11\frac{1}{12}$ fine. The word *fineness* is used to indicate the proportion of pure metal to alloy in the coin. *Remedy allowances* are the limits within which a coin may vary in weight or fineness without ceasing to be legally acceptable. It is also called 'tolerance of the mint.' So far as our rupee is concerned the remedy in weight is $\frac{1}{5000}$ and remedy in fineness $\frac{1}{2000}$.

Coinage may be *gratuitous* or *free*. In the former case no charge is made for coinage by the authority. In the latter, no restrictions are placed upon coinage. Any body can take the metal to the mint and get it coined. Thus India had free coinage of silver before 1893. Any one could take silver to the mint and get it coined into rupees. But free coinage need not be gratuitous. The authority may make a charge for coining. If this charge is equal to the cost of converting bullion into coin it is called *mintage* or *brassage*. If it is higher than this cost, it is known as *Seigniorage*. Seigniorage may be charged by including an alloy in the coin or by a direct charge.

Seigniorage is defended on the ground that it makes the metallic content of the coin less than its face value and thus there is no inducement for the coin to be melted. It also increases the utility of the metal. Gratuitous coinage is defended on the ground that being the function of the State the cost should fall on the public exchequer. Free coinage is favoured because it provides a check against inflation, i.e., over issue of currency. More of this later.

15. Token Coins. Metallic currency may be full bodied coins or token coins. A full bodied coin is one the face value of which is equal to the value of the metal contained in it. A token coin has a face value higher than its value as metal. The Indian rupee is a token coin. Its value as metal is only a fraction of a rupee. Before 1893, the Indian rupee was a full bodied coin. If melted it could be sold for a rupee worth of metal.

Coins are made token coins for two reasons. First, it is cheaper to have token coins in circulation than full bodied coins. Secondly, there is lesser danger of token coins being melted. Sometimes the price of the metal of the coin may rise so much as to make it a full bodied coin. Then it begins to be melted or hoarded. For instance, in 1917 due to the rise in the price of silver the Indian rupee ceased to be a token coin and began to disappear from circulation. The government had considerable trouble in supplying an adequate media of exchange. Similarly in 1940 standard coins

present century. England was on gold standard. India was thus on gold exchange standard. When England left gold in September rupee was still linked with sterling. India was then (and is now) on Sterling Exchange Standard. We shall study these systems in detail later.

18. Paper Money The term paper money applies to bank notes and government notes which pass from hand to hand without difficulty and without question. The term does not generally apply to cheques and bills that have only a limited circulation. The latter are instruments of credit and will receive our attention later.

Paper money is of two types—convertible and inconvertible. The former is that which can be converted into standard coin (or standard metal) at the option of the holder, the latter is not convertible in this sense.

The convertibility of paper money is necessary both to inspire confidence in the minds of the people and to keep its issue within certain bounds. As we shall see later an increase in the supply of money unaccompanied by a corresponding increase in its demand lowers its value in a similar way as happens in the case of any other commodity. The issue of paper money therefore is normally regulated by the law of the State. One method of such regulation is to make it convertible into coins or standard metal.

The greatest danger of inconvertible paper money is the possibility of its over-issue. It is a great temptation to government especially in emergencies like wars to increase their resources by printing more notes and using them as purchasing power. There are many examples of such over-issue in the currency history of the world, e.g., Germany during and after the last war is an extreme example. Excessive note-issue has taken place in India too during the last few years. We shall come to the consequences of inflation, which is the technical term used for such over-issue, in a later chapter.

19. Bank Money. Bank money consists of the various instruments of credit. Credit means good opinion founded on the "belief in a person's veracity, integrity, ability and virtue." In economics credit means confidence in a person's ability to pay.

Credit instruments or bank money takes various forms. Among these are : cheques, bills of exchange, banker's drafts, etc. We shall discuss them in detail in a subsequent chapter. Here it may be noted that strictly speaking credit instruments are not money since they are not universally acceptable.

20. Money of Account. Before we end this chapter on the nature of money a term may be explained—money of account. Money of account is the monetary unit in terms of which the accounts of a country are kept and transactions made. The Rupee, for instance, is our money of account. Sterling, Dollar, Franc and

Mark are the money of account respectively of Great Britain, the United States, France and Germany.

All these units are also the circulating media in the above countries respectively. But it need not be so. Money of account may be different from the money actually circulating in a country. For instance, on account of inflation the German Mark got heavily depreciated in 1922-24. People lost faith in it, since no one knew what the value of the Mark would be the next day, even the next hour. It was risky to enter into transactions in terms of a currency with so uncertain a value. Mark therefore ceased to be the money of account. People entered into transactions in terms of the American Dollar which was the most stable currency at the time. The payments were made in Marks but the transactions were entered into in terms of Dollars. A fixed amount of dollars was to be made good by paying the necessary amount of marks. The Dollar thus became the money of account in Germany.

21. Debasement and Depreciation of Money. Many unscrupulous monarchs in the past when hard pressed for funds had recourse to debasement of coinage to tide over their financial troubles. Debasement is also done by some people who are fraudulently inclined. The usual methods adopted for the purpose are:—

(i) *Clipping*—Metal is finely cut off from the edges. But modern coins have milled edges and clipping is now out of the question.

(ii) *Sweating*—By using some chemicals the quantity of metal in the coin is reduced.

(iii) *Abrasion*—The coins are put in a bag and vigorously shaken for some time. Some minute particles of the metal are left in the bag.

This is what the old swindler did. His modern counterpart has discovered other flourishing trades, *viz.*, printing notes, counterfeiting coins, etc. Our rupee specially lends itself to such fraudulent practices. Many clever people especially goldsmiths or others well-versed in such arts make their own rupees and pass them on to others. All modern governments impose heavy penalties for such crimes. Also the coins and notes are so designed as to make counterfeiting difficult if not impossible.

Any State debasing its own currency is sure to lower its own prestige and incur national dishonour. But when the States are in a financially tight corner, they now resort to the printing press and print notes. All governments do it during war, some more, others less. This is known as inflation. The result is currency depreciation which means lowering of the value of currency. Money buys less for the prices have risen.

22. Gresham's Law. Queen Elizabeth was anxious to reform the English currency debased by her father, Henry VIII. But she was puzzled by the fact that whatever new coins she put into circulation they disappeared. Sir Thomas Gresham, her Financial Adviser,

was asked to throw light on this and the explanation he offered has been dignified into a Law known after his name.

Gresham's Law can be briefly put as '*Bad money drives good money out of circulation*'.

How does it operate? Gresham's Law operates in three ways :

- (a) Good money is hoarded ;
- (b) Good money is melted ; and
- (c) Good money is exported.

By good money here we mean new full valued coins of standard weight and fineness ; and bad money is that which has been debased or is worn out so that it is of less value. For the three purposes mentioned above good money is more suitable. Being hoarded, melted or exported abroad, it will disappear from circulation leaving behind only bad money in circulation.

When does Gresham's Law operate? This law operates under three circumstances :

(a) When full valued coins and debased, counterfeit or worn out coins circulate side by side ;

(b) When metallic money and depreciated paper money circulate side by side ; and

(c) under Bimetallism, i.e., when there are two standard (principal) coins, i.e., both unlimited legal tender, both subject to free coinage and both having metallic value equal to face value. The operation of Gresham's Law under Bimetallism is explained in the next chapter.

Limitation of the Law. It will not operate (a) if there is shortage of currency ; and (b) if there is strong public opinion against bad money in which case it is bad money which will have to go.

23. Indian System of Money. The principal coin in India is a Rupee which at present is almost made of nickel. Its intrinsic worth is not more than two-three annas. The rupee is the money of account and a standard measure of value. Next is the 8-anna piece whose metallic make-up is like that of the Rupee. Both are unlimited legal tender. Then we have small coins—4-anna piece, 2-anna piece, an anna, half anna and pice. The pice is used only in accounting and is not found in active circulation. These coins are limited legal tender and are legal tender up to one rupee.

We have no standard coin, i.e., coin whose intrinsic or metallic value is equal to its 'face' or official value. None of our coins is a full valued coin. They are all token coins. Our rupee is unlimited legal tender but it is a token coin. Its metallic value is much less than its face value. It has been called a 'note printed on silver'. It would be more correct to say now that it is a note printed on nickel.

Besides metallic money, we have paper currency too. Our notes are of the denominations of Rs. 100, Rs. 10, Rs. 5, Rs. 2 and

CHAPTER XXXII

MONETARY SYSTEMS

1. **Introduction.** To perform its functions adequately money must be properly organized. We have seen that one of the most important functions of money is to serve as the standard measure of value. It is necessary, therefore, that the value of the monetary unit itself should not fluctuate too violently. To achieve this end the value of the currency unit is usually fixed in terms of one or two metals, usually gold and silver. Sometimes a country fixes the value of its currency in terms of the currency of another country and artificially maintains it there. Thus result the various monetary systems or monetary standards which have been adopted in practice from time to time. We now proceed to discuss them as under :—

(a) *Bimetallism*, where two metals are standard metals, usually gold and silver.

(b) *Monometallism*, where either gold or silver is the standard metal. When it is silver it is silver standard, and when gold, gold standard. Gold standard may take the forms of full Gold Standard, Gold Bullion Standard or Gold Exchange Standard.

(c) *Paper Standard*.

2. **Bimetallism.** Under Bimetallism both gold and silver are standard metals. A ratio is fixed by law between their values which is maintained by authority. Coins of each of the metals are unlimited legal tender. Debts can be paid in either gold or silver at the debtor's option.

Sometimes both coins are unlimited legal tender but only in one there is free coinage. This was the case in France where the silver franc was not subject to free coinage. Such a standard is called '*Limping Standard*'.

Bimetallism was adopted by France in 1803. The ratio between gold and silver was fixed at $15\frac{1}{2}$ oz. of silver for one oz. of gold. France was able to maintain this ratio for about fifty years. Due to discoveries of gold in 1848-50 the supply of gold increased and its market value relative to silver fell. France was then compelled to change its original ratio and give silver a higher value in order to save it from the melting pot under the operation of *Gresham's Law*. This law may be stated thus :

"Other things being equal, when in a country two (or more) kinds of money circulate at the same time, *bad* money drives out *good* money from circulation." An example will make clear the operation of this law under bimetallism. Suppose a country maintaining a Bimetallic standard fixes the ratio at $15\frac{1}{2}$ oz. of silver for one oz. of gold as France did. If the supply of gold increases to such an extent that in the market only 15 oz. of silver is enough

to buy an ounce of gold it will mean that the ratio fixed by the government is under-valuing silver and over-valuing gold. Gold here will be bad money and silver good money. People will make their payments in the cheaper metal gold and hoard silver. Moreover they will take their ounce of gold to the mint and exchange it for 15½ ounces of silver, sell 15 ounces of silver for one ounce of gold in the market and thus make a gain of ½ ounce of silver on every transaction. Gold will be used as money and silver will disappear from circulation. Bad money thus drives good money out of circulation. Instead of Bimetallism the country is left with Monometallism. One way of maintaining Bimetallism, therefore, is to change the mint ratio according to changes in the market ratio between the value of the two metals. France did this by debasing her silver coins, so that a smaller amount of silver was made equal to the same amount of gold.

Another method by which the ratio between the two metals may be maintained is by a large number of countries adopting the Bimetallio system. Under such conditions if one of the metals say gold becomes cheaper its demand from the Bimetallio countries increases while the demand for silver correspondingly decreases. This tends to depress the price of silver and raise the price of gold thus bringing them near the ratio established by the countries on Bimetallism. It was with this end in view that France, Belgium, Italy and Switzerland founded a monetary union in 1865. A few years later Greece, Servia, Rumania and some South American States also joined this Union. But this Union was also unable to maintain Bimetallism and broke down in 1874 when the price of silver fell in terms of gold.

During the last quarter of the 19th century several attempts were made to establish Bimetallism on an international scale. But the plan could not succeed without the co-operation of the United Kingdom. The latter country did not want to change her monetary standard.

Bimetallism was favoured by the United States to safeguard her silver interests. India closed her mints to the free coinage of silver in 1893 thus depressing the price of silver, which was already falling since 1874, due to increase in its production and its demonetization by several countries. In 1897 the Government of India were asked whether they would re-open the Indian mints to the free coinage of silver if France and the United States opened theirs to the free coinage of gold as well as silver. The Government of India did not favour this suggestion. Thus the mints of France and the U.S.A. remained closed to the free coinage of silver.

Another motive for establishing international Bimetallism was to increase the supply of money in the face of increasing production in the world. When two metals are legal tender naturally more money is available for carrying on transactions. The development of banking and the use of paper money and credit instruments supplied this need and ultimately the idea of an international Bimetallism was given up.

3. Merits and Demerits of Bimetallism. The following merits are claimed for Bimetallism :—

1. Ample supply of media of exchange is assured. There being two metals of which money can be minted there will be few occasions of scarcity.

2. The banks will find it easy to keep the necessary cash reserves against liabilities. Both silver and gold coins being unlimited legal tender, they can keep reserve in any or both.

3. The government has also some fiscal advantages. It can meet its requirements of cash more easily than would be the case under monometallism.

4. Bimetallism is supposed to facilitate international trade as par of exchange can be established with all countries whether on gold or silver. The silver currency can be matched with silver and gold with gold.

5. Bimetallism has been advocated in preference to universal gold standard on the ground that the stock of gold in the world will not be enough to cope with the demand for gold for monetary purposes.

6. Arguments in favour of Bimetallism acquired greater force in the last quarter of the 19th century when the price of silver registered a phenomenal fall. It was thought that the adoption of Bimetallism by all countries would arrest this fall. It was feared that unless this was done, the purchasing power of the silver-using countries would be seriously curtailed and this was bound to have adverse repercussions in those countries which relied on markets in the silver-using countries.

7. It was claimed that the bimetallic standard would be more stable. It was expected that fall in the price of one metal may be counteracted by the rise in that of the other.

Case against Bimetallism. Formidable as the above arguments may look, all efforts to bolster up bimetallic standard failed. All were convinced that unless adopted internationally it had no chance of functioning successfully and of this there was little prospect. England showed no inclination towards adopting it and set the fashion for other advanced countries.

Adopted by a single country, bimetallism was sure to degenerate into alternative standard (either gold or silver) through the operation of Gresham's Law.

The world has now discovered a much cheaper medium of exchange, i.e., paper, and bimetallism is unnecessary to ensure ample supply of currency. The paper currency is as good a reserve for the banks. The issue of paper money also enables the governments to tide over their financial difficulties during a period of stress and strain.

The technique of foreign exchanges has been so perfected that

international trade can be promoted even without having a bi-metallic standard.

Paper being now the real medium of exchange all arguments in favour of bimetallism intended to meet the shortage of supply of precious metals have lost their force.

As for stability, gold or silver monometallism has manifested much greater stability as it has been remarked that one sober person will be able to walk much more steadily than two tipsy fellows with their arms interlocked.

Divergences, almost daily, between the mint ratio and the market ratio are sure to cause confusion in trade, engender speculation and create complications in the working of the monetary system.

Can the official mint ratio between gold and silver under bimetalism be maintained? The advocates of the gold standard say yes. They point to what has been called the *compensatory action* of the bimetallic standard. It is said that any divergence between the mint and the market ratio will let loose forces which will remove this divergence. The following example will make this clear.

Suppose the mint ratio between gold and silver is 1:15. This means that one gold coin is equal to 15 silver coins. Now suppose that in the market the relative prices of the two metals have so changed that ratio is 1:16. Now it will be to the advantage of a person to go to the market and exchange one gold coin for 16 silver coin, put 1s. in his pocket and exchange 15 silver coins for one gold coin; and repeat the process. If many people do like this, as they should do, demand for silver in the market will be increased and its price must rise. This process will go on till the rise in the price of silver is sufficient to restore the old ratio 1:15 which was equal to the mint ratio. If, on the other hand, gold becomes cheaper, so that the ratio becomes 1:14 instead of 1:15, then demand for gold will be stimulated and the previous ratio will be restored sooner or later.

The compensatory action looks perfect in theory. But it will be a perpetual sea-saw. The market rates must vary from day to day so that either gold coins are driven out of circulation or the silver coins are driven out. It does not speak well of the stability of a monetary standard. It is no wonder that there are few advocates of bimetallism now. It is not at all a live issue. In these matters the world has now moved far ahead.

4. Silver Standard. Under a silver standard the value of the monetary unit is fixed and maintained in terms of silver. This is usually done by the free coinage of silver into coins of a given weight and fineness. India for instance was on a silver standard from 1833 to 1893. The rupee was freely coined and its weight was fixed at 180 grains $11/12$ fine. Any one with silver could get it coined from the mint into rupees and rupees on the other hand could be melted in order to obtain silver if necessary.

This system made the expansion and contraction of currency automatic but trouble arose when the gold price of silver began to fall seriously after 1874. This fall was due partly to the greater supply of and contraction in the demand for silver, and partly to the greater demand for gold by various European countries for currency purchases, unaccompanied by increase in the supply of the yellow metal.

The consequences of the fall in the value of silver were serious for India. It paid people to purchase silver cheaper and get it coined into rupees from the mint. This led to a general rise in prices due to the increase in the amount of money in circulation. Our import trade suffered, because more silver rupees were required to pay for imports of a given value in sterling which along with gold (since England was on Gold Standard) appreciated, in terms of rupees. The burden of India's sterling obligations (Home Charges as they are called) also increased for the same reason. Difficulties thus arose in balancing the Indian Budget. Ultimately at the recommendation of a committee (Herschall Committee) of experts the Indian mints were closed to the free coinage of silver. Thus ended the silver standard in India.

The general principles of the working of the silver standard are the same as those of the gold standard discussed below. Gold standard, however, is preferable to silver standard because the yellow metal is far less subject to fluctuations in its value than silver.

5. Full Gold Standard. A country is on a full gold standard when gold serves not only as a standard of value but also circulates as coins. Before 1914 Britain had this kind of gold standard and so had the U. S. A., France, Germany and other European countries.

We may illustrate its working from the example of pre-1914 Britain. Gold circulated in the form of sovereigns of a given weight ($113\frac{1}{623}$ grs.) of pure gold, plus a little alloy. The actual weight of the sovereign was 123.27447 grains $\frac{11}{12}$ fine. In other words one ounce of gold $\frac{11}{12}$ fine could be coined into £3 17s. 10½d. in English money. Actually the Bank only gave £3 17s. 9d. for every ounce of such gold. To purchase an ounce of standard gold from the Bank one had to pay £3 17s. 10½d. per oz. Under this system, therefore, the purchasing power of a British sovereign could not rise appreciably above or fall appreciably below 123.27447 grains of gold $\frac{11}{12}$ fine or $113\frac{1}{623}$ grains of pure gold.

The system could not be maintained during the World War of 1914-1918 and had to be given up. In April, 1925, Great Britain adopted Gold Standard but of a different variety, i.e., Gold Bullion standard.

6. Gold Bullion Standard. Under this system the value of the currency is fixed in terms of gold by making such currency convertible into gold and *vice versa*. But gold does not circulate as coins.

In the United Kingdom under the Gold Bullion Standard the Bank of England was willing to buy any amount of gold at £3 17s. 9d. per ounce 11/12 fine and to sell it in minimum amounts of 400 ounces, at £3 17s. 10½d. This was the same rate as before 1914. Gold was allowed freely to move into or outside the country. No gold coins circulated. The idea was to make gold available only for foreign payments.

The Gold Bullion Standard was adopted in India in 1927 on the recommendation of the Hilton Young Commission. The currency authority was placed under an obligation to buy or sell gold at rates announced beforehand but the minimum quantity fixed was 400 oz. of gold. The commission claimed that it had all the advantages of a full gold standard minus its disadvantages :—

(i) It is economical as no gold coins have to be minted and put into circulation. In their daily dealings the public use a cheap medium of exchange either paper money or rupees.

(ii) It makes for national prestige because gold is made freely available both for use inside the country and for exporting it abroad and not merely for exchange purposes as under the Gold Exchange Standard.

(iii) The paper currency under gold bullion standard has a more tangible and solid backing. It is convertible into gold. But under the Gold Exchange Standard one token (note) is convertible into another token (rupee).

(iv) It is also claimed that automatic mechanism for expansion and contraction of currency is maintained, for the currency will be expanded when gold is sold to the currency authority and it will be contracted when gold is purchased by the public.

But these merits of the gold bullion standard are more or less theoretical, at any rate, they turned out to be so in the case of India. For the average man the convertibility of notes into gold was a farce for who could bring sufficient paper money to purchase 400 oz. of gold (400 oz. = 1065 tolas) ? If the price of gold is Rs. 100 per tola, which is the approximate price these days, it will mean that to test the convertibility of notes into gold one must bring currency notes worth about rupees one lakh. For the ordinary man, therefore, notes are practically inconvertible. In a country like India if the notes are made convertible into gold under the above conditions and not into rupees, public confidence in the paper currency will be rudely shaken. Under Gold Bullion Standard automatic expansion and contraction of currency was not brought about.

In 1931, England went off the Gold standard and so did India,

The Gold Bullion Standard made an exit, 'unwept, unhonoured and unsung.'

Some economists think that since there is no shortage of gold in the world now, the full gold standard should be preferred, because it is more automatic in its working. In a later chapter we shall study the working, failures and prospects of gold standard in greater details.

7. Gold Exchange Standard. This system was adopted by various countries like India, Denmark and Australia. India was on this system when the war of 1914-18 broke out. Under it the internal currency consisted of silver rupees which were token coins and paper notes, but for foreign payments British currency (convertible into gold in London) was sold by the Government in return for rupees at a fixed rate. In London the Secretary of State sold rupees (called Council Bills since they were sold by the authority of the Secretary of State in Council) to those who wanted to make payments in India. When Government of India sold drafts on the Secretary of State, they were called *Reverse Councils*. The rates for buying and selling of rupees were fixed in such a way as to keep the sterling-rupee ratio at 1s. 4d. or near about.

The Gold Exchange Standard necessitates the keeping of two reserves, one in the country which has adopted it, in the form of home currency and the other at a foreign centre. The successful functioning of the system depends on the adequacy of these funds. The Government of India maintained a reserve for the purpose called the Gold Standard Reserve. The country adopting Gold Exchange Standard may be called the satellite country and the other country with whose currency the inferior currency is linked may be called the 'planet' country.

The system broke down during the war of 1914-18 due to great demand for rupees accompanied by an excessive rise in the price of silver. High price of silver made the rupee a full-bodied coin (instead of being a token coin as it was) leading to its melting and hoarding. More rupees were required to make payment for the excess of Indian exports over imports resulting from the war. The government was unable to supply rupees at the old fixed rate. First the rate was raised but later the attempt to maintain the rupee in terms of the sterling was given up. After the war (during 1920) the gold exchange standard was again tried at 2s. (gold) per rupee, but had to be given up. This time for opposite reasons, viz., a fall in the price of silver accompanied by a great demand for sterling due to excess of imports over exports and the necessity of making payments abroad. The government was unable to sell sterling (buy rupees) at 2s. gold or even at 2s. sterling (sterling was not on gold at that time and had depreciated in terms of that metal).

Among the advantages claimed for the gold exchange standard was that it gave all the advantages of the full gold standard with-

1. Before the war of 1914 the selling and buying rates of the rupee were 1s. 4½ d. and 1s. 3²⁰/₃₂ d respectively, the former in London [Council Bills] and the latter in India [Reverse Councils]

out involving the use of gold. Moreover linking the rupee with the sterling was said to be of benefit to India, because of her considerable trade relations with Great Britain and the financial status of London in the international field. International payments when made through sterling were considerably facilitated. While the sterling link gave the rupee a high status.

Defects of the Gold Exchange Standard. The Gold Exchange Standard was criticised by the Hilton Young Commission in scathing terms. The following points may be mentioned in this connection:

(i) It is too abstract, far from simple and 'unintelligible to the uninstructed public'. Not even educated Indians could easily understand its working. Such a system cannot inspire popular confidence or enthusiasm. It made the currency authority a suspect in the eyes of the public.

(ii) As the system operated in India, there was unnecessary duplication of the reserves. There were three reserves in India—Gold Standard Reserve, Paper Currency Reserve and the Government of India's balances. These reserves had their counterparts in England.

(iii) The system was not automatic. In its operation it depended too much on the will of the currency authority.

(iv) It lacks elasticity. Expansion of currency did take place in India when rupees were issued to meet Council Bills but once issued the rupees remained in circulation. There were no means by which contraction of currency could be effected.

(v) A very serious defect is that the currency policy of one country becomes subservient to that of another country. The Indian rupee was subject to all misfortunes to which English currency may have been subjected to.

(vi) The Hilton Young Commission was of the opinion that the Gold Exchange Standard had great inherent defects and it was not possible to correct them. They came to the conclusion that it could not be mended, it must be ended. Accordingly they recommended its replacement by Gold Bullion Standard.

All the three systems described above are, broadly speaking, forms of gold standard. Let us now proceed to examine the advantages and defects of a system of currency in which gold is the ultimate standard of value.

8. Advantages of Gold Standard. Several advantages are claimed for gold standard, especially when it is adopted simultaneously by a number of countries, i.e., international gold standards. According to theory gold standard possesses the following advantages:

(1) It is an objective system and is not subject to the changing policies of the Government or the currency authority.

(2) It enables the country to maintain the purchasing power of its currency over long periods. This is so because the currency and credit structure is ultimately based on the gold in possession of the currency authority.¹

(3) Another important advantage claimed for gold standard is that it preserves and maintains the external value of the currency (rate of exchange) within narrow limits.² As a matter of fact within the gold standard system, it provides fixed exchanges which is a great boon to the traders and investors. International division of labour is greatly facilitated.

It in fact gives all the advantages of a common international currency. It establishes an international measure of value. As Marshall pointed out before the Fowler Committee (report on Indian Currency in 1898) the change to a gold basis is like a movement towards bringing the railway gauge on the side branches of the world's railway into unison with the main lines.³ This greatly facilitates foreign trade, because fluctuations in rates of exchange hamper international trade.

(5) It is further claimed that gold standard helps to adjust the balance of payments between countries automatically. How this happens may be illustrated by a simple example. Suppose England and America are both on gold standard and only trade with each other and that a balance of payments is due from England to America. Gold will be exported from England to America. The British central bank will lose gold. This will contract currency in England and bring about a fall in the British price level. Price level in America will rise due to larger gold reserves and expansion of currency and credit. England will become a good market to buy from and bad market to sell in. Conversely America will become a good market to sell in and a bad market to buy from. British exports will be encouraged and imports discouraged. American exports will be discouraged and imports encouraged. The balance of payments will tend to move in favour of Britain until the equilibrium is reached. It is in this way that movements of gold by affecting prices and trade keep equilibrium among gold standard countries. More of this later.

(6) It inspires confidence and contributes to national prestige, for "so long as nine people out of ten in every country think the gold standard the best, it is the best."

9. Disadvantages of the Gold Standard. Gold standard is not free from disadvantages :

(i) It is costly and the cost is unnecessary. We only want medium of exchange, why should it be made of gold ? It is a luxury. 'The yellow metal could tickle the fancy of savages only.'

(ii) Even the value of gold has not been found to be absolutely stable over long periods.

1. See chapter on Central Banks, Sec. 6.

2. See chapter on Foreign Exchanges.

3. Report Fowler Committee, para 34.

Thirdly, most important of all, the government and central banks should not off-set the effects of gold movements. A country losing gold must allow its price level to fall and the one that gains gold must allow the price level to rise. When gold comes in currency should be expanded and when it goes out the currency should correspondingly contract.

Since World War I these conditions have not been satisfied and the countries concerned have not obeyed the rules of the gold standard.

12. Why Gold Standard Broke Down? The gold standard broke down in country after country soon after its rehabilitation during the post 1914-18 war decade. There were several reasons for this development.

First, due to general political unsettlement a habit arose on the part of certain Continental countries to keep their funds for short periods in foreign central banks especially in Great Britain. These funds were liable to be withdrawn at the earliest danger signal. Withdrawal of such funds from Britain on the part of France led to gold standard being suspended in 1931 in the former country. They Bank of England could not afford to lose its gold resources in large quantities at such a short notice.

Secondly, international obligations in the form of Reparations and War Debts arose out of the last World War. Since the creditor countries refused to accept payments in the form of goods and also refused to continue lending to the debtors the debts had to be cleared through gold movements. This led to concentration of $\frac{3}{4}$ of the world's gold in the U. S. A. and France, the two chief creditor countries. The gold left with the other countries was not enough to enable them to maintain gold standard successfully.

Thirdly, the gold-receiving countries did not "play the game of the gold standard." They (especially the U. S. A.) did not allow this gold to have any effect on their price levels. The gold was "sterilised" or made ineffective. Had prices risen in these countries imports would have been encouraged and exports discouraged and an unfavourable balance of trade would have led to the movements of gold in the reverse direction. Since this was not allowed to happen the gold standard failed to work automatically.

Fourthly, Gold Standard failed also because the economic structure of the various countries concerned had become less and less elastic after the World War of 1914-18. This was due to several causes. The enormous growth in the indebtedness of the Governments and Local Authorities resulted in a mass of interest payments fixed by contract over a long period of years. The huge expenditure in the form of payments to the social services could not be easily reduced. The trade unions were now able to offer a much stronger resistance to wage cuts than before 1914. The prices of raw materials and finished goods were becoming more and more partial monopolies, cartel agreements, etc. The result was no longer moved in the directions warranted by gold equilibrium failed to be restored as of old.

Fifthly, another weakness that was discovered in the gold standard in practice was that it was always liable to collapse in a crisis. It has often been called a fair weather standard only. Another objection that was frequently urged against the system was that gold movements caused inconvenient changes in interest rates. Deflation for instance may be made necessary in a time of crisis to prevent a suspension of the standard. But deflation which involves falling wages and prices may prove a cause of serious trouble. Wage cuts are resisted by trade unions, and falling prices increase the burden of Government and other people who have fixed payments to make. Moreover, falling prices discourage enterprise and create unemployment.

Thus it was that country after country abandoned this system of currency.

13. **The Future of Gold Standard.** It is unlikely that after the experiences of the inter-war period gold standard will be established in the conventional sense by any country of the world. Gold standard worked more or less automatically under the pre-1914 conditions of trade and finance. The experience of the inter-war period showed that the gold standard required quite a fair degree of management and still greater degree of co-operation for its smooth working. The rules of the game of the system must be obeyed. But even then the rigidities of the economic system stood in the way of proper adjustments of price levels and costs necessary for its successful working. Moreover, gold had got maldistributed among the various countries, America possessing the lion's share 80% of world's stock in 1939. It could not be redistributed without the re-establishment of unrestricted movements of goods. All these things required international co-operation of a high degree. If such co-operation was forthcoming a managed system in which gold did not play as prominent a part as under gold standard could be devised. People had lost faith in the capacity of gold to maintain stability either of price levels or of exchange. Gold ceased to enjoy its old prestige. Managed currency on the other hand had been successfully tried in several countries (e.g., the U.K.)

On the other hand gold, producing countries, like America and South Africa, especially the former with enormous stock of accumulated gold, could not support a scheme in which gold played no part. Moreover, from the long-period point of view managed currency without solid foundations of gold did not inspire confidence.

The result has been a compromise in what is known as the Brettonwoods Scheme of the International Monetary Fund. This scheme aims at achieving all the advantages of a gold standard without its disadvantages by international co-operation. Gold will still play a role but not such a dominant role as it did under the gold standard. We shall discuss this scheme in our chapter on Foreign Exchanges.

14. **The Causes of Gold Movements.** We have referred in the 'Rules of the Gold Standard' to the inflow and outflow of gold. Let

us understand why gold movements take place. Benham has mentioned the following causes of gold flows¹:—

1. *Monetary Policy.* If a country inflates its currency, and the others do not, its prices relative to world prices will rise. This will check exports and increase imports and under a free gold standard, gold will flow out.

2. *Capital Movements.* If a country is lending money abroad, its balance of payments becomes adverse and gold must move out. But when this happens and the rules of the gold standard are observed, there will be a corresponding contraction of currency (or in technical terms its money income will be reduced). Prices will correspondingly fall and check imports and stimulate exports. Gold will then tend to return. The country that receives gold will find its money incomes increased (i.e., the currency will expand) and prices will rise. Imports will increase and exports decrease so that it will develop an unfavourable balance to that extent. Then gold will flow out.

3. *Reciprocal Supply and Demand of Goods and Services.* A country which develops a surplus of exports of goods and services will tend to acquire gold and *vice versa*.

4. *Changes in Population.* If population increases due to increased immigration, demand for money will increase; its value will rise, i.e., prices will fall; exports will increase and imports will be checked and gold will tend to flow in. The decrease in population will have the opposite effect.

5. *Changes in Capital.* Increased savings in a country will lead to large accumulation of capital. This will give a fillip to production, output will increase, prices will fall, exports will increase and imports decrease and gold will flow in.

6. *Changes in Technique.* A marked technical progress taking place in a country will cheapen its production. Imports will be checked, exports will increase and gold will flow in.

7. *Changes in Demand.* If on account of any reason the demand in foreign countries for the goods of a country decreases then exports will fall off. Other things remaining the same, gold will flow out.

"It should be remembered that it is always changes *relatively* to other countries, and not absolute changes, which are important in this context." (Benham)

15. *Paper Standard or Managed Paper Currency or Currency Exchange Standard.* Under this system paper money is the standard money. The currency authority of the country does not accept the responsibility to convert the paper money into gold. After the World Economic Depression (starting from 1929) many countries including Great Britain and India were compelled to give up the

1. Benham—Economics, 1940, pp. 456—459.

Gold Standard for reasons to be considered in a subsequent chapter. They were thus led to adopt what may be called the Paper Standard.

As far as India is concerned the system is called the Sterling Exchange Standard. But since sterling is not on gold this system is also a variety of the Paper Standard. As soon as sterling is put on a gold basis the Sterling Exchange Standard becomes Gold Exchange Standard.

The currency authority in India now is the Reserve Bank of India. This Bank maintains the value of the rupee in terms of sterling at the ratio 1s. 6d. by buying and selling sterling at 1s. $6\frac{3}{16}$ d. and 1s. 5-49/64 per rupee respectively in amount not less than £10,000. The internal currency consists as before of rupee (token) coins and rupee notes of various denominations.

This is a currency exchange standard since the standard is the currency of a country not on gold. If the country concerned was France it would have been called the France Exchange Standard and if the U. S. A., Dollar Exchange Standard.

Great Britain is also on paper standard these days, though the British pound sterling, as a matter of policy, has been kept at a fixed value in terms of dollars.

Even though Great Britain has abandoned Gold Standard since September, 1931, and sterling is no longer legally convertible into gold, the currency of the country is still regulated with reference to gold reserves in accordance with the Bank Charter Act of 18 as amended later.

To avoid fluctuations in the external value of the sterling an Exchange Equization Account has been constituted. This Account is under the control of the British Treasury, but is in effect a department of the Bank of England. When foreign funds flow into Great Britain (usually for short periods) demand for sterling arises and sterling would normally appreciate in terms of foreign money. Such funds are acquired by the Exchange Equilization Fund and thus abnormal appreciation of sterling is prevented. Conversely when funds move out of England demand for foreign currency would normally depreciate sterling in terms of that currency. The Exchange Equilization Account releases gold for such payments and thus saves sterling from abnormal depreciation.

16. The Best Currency System. The question arises: Which is the best currency system out of those discussed above. The answer is not a simple one. Different systems have worked more or less efficiently under different circumstances. A better way of asking the same question would be: What is the test of a good currency system?

Roughly speaking a currency system must fulfil the following conditions:—

(i) It must maintain a reasonable stability of prices in the country. This means its internal value or purchasing power in terms of goods

CHAPTER XXXIII

THE VALUE OF MONEY

1. Introduction. In the previous chapter we noted that the best money system is one which preserves the stability of the internal and external value of money. The question arises : What do you mean by term 'value of money.'

The term value of money has been variously used. Thus it may mean :

(i) Its command over a definite weight and fineness of gold or silver as is the case under gold and silver standard respectively.

(ii) The units of foreign currency that it will purchase. For instance, at present the rupee has value in term of sterling of 1s. 6d. This is called the exchange rate or exchange ratio.

(iii) Its command over goods and services within a country. This is usually called the (internal) purchasing power of money.

When we use the term "the value of money" without qualification we mean it in the third sense above.

It should be noted that the value of money, or its purchasing power, has a definite though inverse relation with the general level of prices in a country. When general prices rise the value of money falls; conversely when general prices fall the value of money rises. In this connection the terms appreciation and depreciation are also used. When prices rise there is a depreciation of money, when they fall there is appreciation.

In this chapter we shall discuss the causes of variations in the value of money, i.e., its purchasing power over goods and services. In this connection various theories have been advanced from time to time. Among these are :

(i) The Quantity Theory of Money.

(ii) The Cost of Production Theory of money.

(iii) The Marginal Utility Theory of Money.

(iv) The State Theory of Money.

After discussing these theories we shall give the correct view at the end.

2. The Quantity Theory of Money. Stated in its simplest form according to the Quantity Theory of Money, the value of money varies inversely as its quantity. "Double the quantity of money, and other things being equal, price will be twice as high as before, and the value of money one half. Halve the quantity of money and other things being equal, prices will be one-half of what they were before and the value of money double."

$$\text{Thus } PT = MV + M'V'$$

$$P = \frac{MV + M'V'}{T}$$

Professor Fisher contends that in the short period T , V , V' remain constant. The proportion of M' to M also remains constant. Therefore P varies directly with M . In other words $\frac{1}{P}$ (value of money) varies inversely with M or quantity of money in circulation.

Why do "other things" (T , V , V' and proportion of M' to M) remain constant? Professor Fisher holds that:

Transactions or amount of work to be done by money remains constant in the short period, because population does not change, production per head of population does not change, percentage of consumption by producers does not change, percentage of exchange by barter does not change and the rapidity of circulation of goods does not change. Methods of production and habits of the people in this connection are practically fixed. Thus the demand for money remains constant.

As regards the supply side rapidity of circulation of money and credit depends upon custom and business habits of the people. The proportion of M' to M depends upon the policy of the banks. All these do not change appreciably in the short period. Hence the value of money varies inversely with its quantity.

4. Criticism of the Quantity Theory. The Quantity Theory has been widely criticised. With the qualification "other things remaining the same" it is a useless truism. The real trouble is that other things never remain the same. They change not only in the long period but also in a comparatively short period. Population, amount of business transacted per head of the population, velocity of circulation, policy as regards the proportion of credit to cash all are subject to change, and changes in them are constantly occurring. Moreover, these factors are not independent variables as Fisher assumes. For instance, a change in M in itself may cause a change in V , and thus a change in P more in proportion to a change in M . After the last Great War the German mark was depreciating fast. People lost confidence in it, so that no one was willing to hold it. The moment people received any money, they at once turned it into goods. The rapidity of circulation of money (V) increased progressively and out of all proportion to the increase in the note issue (M). Similarly a change in M may cause and does cause frequently change in T , and a change in P may lead to change in M . An increase in the supply of money may raise prices, increase profits and stimulate production beyond the profitable level thus again depressing prices. Moreover higher price level may necessitate the issue of more money to carry on transactions. Thus high price level may be the cause rather than the effect of the increase in the quantity of money.

The most important exposition of this view of money, however, is by the German Economist G.F. Knapp (1842-1926). He has expounded it in his well known book "State Theory of Money". According to Knapp money derives its substance from the authority of the state. Law proceeds from the State; money is accordingly a State institution." Its validity is independent of the contents of the pieces circulating as coins.

Several objections can be advanced against this theory. First, money can come into existence without its creation by the State. Secondly, notes and deposits of private banks are independent of State control. Thirdly, the value of money largely depends upon its quantity. The State can control the value of money only by controlling its quantity. The State cannot maintain any value of money it likes as is shown by the history of inflation in various countries during two great wars and other periods.

The principle of regulation of money by authority, however, has been accepted in recent years especially after the Depression of the 'thirties. But this far from justifies the position taken by the State theorists.

8. Supply and Demand Theory of Money. We know that the value of money depends on the price level. It varies inversely as the general level of prices, i.e., if the prices rise its value falls and *vice versa*. But the price level depends on the one hand on demand for money (i.e. volume of goods being sold) and the supply of money, (i.e., quantity). The correct view of the value of money explains it in terms of its supply and demand. It states that 'at any moment, the value of money like the value of other commodities is determined by the relation between the demand for money and its supply'. The Quantity Theory also speaks of the supply of and demand for money, but fails to present adequately the forces acting behind supply and demand. It takes many of the factors of the situation as constant and lays stress primarily on the quantity of money in circulation. Moreover, the concept of demand for money in the equation is too vague. Let us take the supply and demand separately and study the various forces behind them.

9. The Supply of Money. In a modern community the supply of money may consist of (a) metallic bullion, i.e., gold or silver; (b) legal tender currency issued by the government or under government regulation; (c) various instruments of credit, e.g., cheques, drafts, bills of exchange, etc.

Each of these sources of supply depend upon various conditions (a) **Metallic Bullion.** The amount of bullion available for currency purposes can increase on account of (i) improvement in mining methods; (ii) discovery of new mining deposits; or (iii) more gold coming from other non-monetary uses

(b) The amount of legal tender currency and other subsidiary coins will depend upon (i) the nature of government regulations as

the house is the demand for occupation."¹

The demand for money is thus the demand to *hold* money rather than *consume* it. Money may be held by private individuals, business organizations, or public institutions of various kinds. Why do people want to hold money? The reasons are various. Ordinary consumers hold money in order to meet their day-to-day requirements for purchasing consumer's goods. Entrepreneurs may hold it for their current expenditure on wages and other sundry expenses. Public bodies also hold money for a similar reason. Sometimes money is held due to the lack of a more profitable alternative. The other alternatives to holding money are to spend it on consumer's goods or to invest it. Investment may be in goods, securities or mere balances in the banks. People do not and cannot spend all their incomes as soon as they arrive. The expenditure has to be spaced according to requirements. As regards investment it is not always an attractive alternative especially during short periods. It may be troublesome or risky. Stocks of goods require looking after and can deteriorate or depreciate in value. Securities also may fall in value. The bank interest on savings may not be high enough to attract funds. Similarly profits may be either low or may be expected to fall. Under such conditions more money will be held than invested. Thus people tend to hold more money during a depression than during a period of brisk trade. The demand for money during a depression is therefore high and consequently its value is high. In other words general prices during a depression are low. On the other hand when higher profits are expected, investments increase and the demand for money falls (i.e., less money is held by the people) the value of money falls or the general level of price rises. This tendency of the people to hold money has been called by Lord Keynes "liquidity preference." Thus there can be increase or decrease in "liquidity preference," meaning thereby that people prefer to hold more or less of their incomes in the form of ready purchasing power.

The demand for money in this sense depends upon various circumstances. An increase in population will necessitate larger amounts of money to be held. Any methods by which currency can be economised (e.g., barter, amalgamation of business, etc.) will reduce the demand for money. More equal distribution of wealth will tend to increase the demand for money, because poorer sections of the community will be able to hold more money than before. Moreover, psychological causes also may affect the demand for money. As we have already said expectation of fall in prices (rise in the value of money) will cause people to hold money rather than spend it. Conversely, if prices are expected to rise people will tend to hold less money, i.e., either it will be spent or invested.

The idea of "velocity of circulation" in the Quantity Theory was criticised by Professor Cannan and others. The concept is

1. Quoted by Stevenson and Branton: *Economics of Banking, Trade and Finance*, p. 15.

vague. Expressed in terms of demand for money the same idea becomes more definite. For instance, during periods of rising prices or depreciating currency the velocity of circulation of money is said to have increased. We can also say that the demand for money has decreased. The moment a person gets hold of some money he tries to get rid of it by spending it. The opposite happens when prices are falling. During a depression instead of saying that the velocity of circulation of money is low, we say that the demand for money is high.

11. Elasticity of Demand for Money is Unity. When we say that the value of money depends exclusively on its quantity (i.e., doubling of money halves its value and halving it doubles its value) it is based on an important assumption that elasticity of demand for money is unity.

Demand for money largely depends on the extent of barter and credit and above all on the volume of transactions. It is assumed that over a period there is little change in the conditions of demand for money (i.e., the demand curve remains unchanged). Demand for money remaining the same, its value will, therefore, entirely depend on its supply (or quantity). Any change in the quantity of money, will bring about an *exactly proportionate* change in the value of money. If the quantity of money increases 100%, prices rise 100% and if quantity of money is decreased 100%, prices will come down *exactly* 100%.

This does not happen in the case of a commodity. If the supply of wheat is increased 100%, its value will not fall 100%. Why?

It is supposed that money is just a ticket serving as a medium of exchange and it has no use apart from it. In case, therefore, it is increased, it must be exchanged for goods in existence. Suppose there are 100 articles in a community and there are 100 coins; 100 coins will exchange for 100 articles and the price will be one coin per article. Now if the quantity of money is doubled then 200 coins will exchange for 100 articles and the price will be 2 coins per article. The purchasing power of 200 coins and 100 coins remains the same i.e., in both cases 100 articles are purchased. It is said, therefore, that the change in the quantity of money is immaterial. This is expressed by saying that elasticity of demand for money is unity.

But is elasticity of demand for money really unity? No.

In the world of reality we do not find that every change in the quantity of money is followed by an *exactly proportionate* change in the price level. In Germany when inflation was going on after World War I prices rose much more than were justified by the increase in the circulating media. Inflation necessitates further inflation. Demand for money also goes on increasing side by side. People lose confidence in their currency much faster at every stage of inflation. Prices are expected to rise every day. People start charging 'tomorrow's' price. Hence when quantity of money increases, its value does not fall proportionately but it falls much more.

In the same manner when there is depression, prices go on falling even though there is no change in the quantity of money. During world-wide depression of early 'thirties many countries increased the supply of currency to raise the prices but there was little response.

The fact is that price phenomenon is a complicated phenomenon. Quantity of money is only one of the many factors affecting it. It is, therefore, idle to expect that every change in the quantity of money will be reflected by *exactly proportionate* change in the price level. We may, therefore, conclude that elasticity of demand for money is *not* unity.

12. Conclusion as Regards the Value of Money. The value of money like the value of every other thing is determined by the interaction of the forces of supply and demand. The supply of money in a modern community consists of gold or silver bullion, legal tender currency, subsidiary coins and the various credit instruments like cheques, bills of exchange, bank loans, etc. The supply of monetary bullion depends upon technical efficiency as regards mining, discovery of new mines, and diversion from non-monetary uses including hoards. The supply of legal tender and subsidiary coins depends upon regulations of the government, and the needs of the government for itself. The volume of bank money is determined by the magnitude of deposits and the credit policy of the banks. The stage of the economic development of a community will determine what sort of money is used to what extent.

The demand for money comes from private individuals and various private and public organizations who desire to hold cash. The amount demanded is determined by factors like the size of the population, the methods of payments adopted, the volume of payments to be made, the way the wealth is distributed in the community and finally the general outlook as regards business prospects.

It is the supply together with the demand that determines the values of money or the general price level. Given the supply, an increase in demand raises the value of money or lowers general prices, as happens during periods of depression. Conversely, given the demand for money an increase in its supply lowers the value of money or raises the general level of prices as happens during periods of brisk trade. The price level tends to be maintained at that point where supply and demand are in equilibrium.

An Anomaly. During periods of brisk trade volume of transactions very much increases which means an increase in demand for money. Hence value of money should increase and the prices should fall. Conversely, when trade is stagnant, there is little demand for money, its value should fall, i.e., prices rise. But the case is quite the opposite. What is the explanation?

The explanation lies in the fact that the volume of credit readily responds to the general business conditions. In times of business prosperity, there is a greater readiness to grant and use credit. This is due to general optimism prevailing at the time.

Hence expansion of credit outstrips the volume of trade. Expansion of credit means increase in general purchasing power and the rising of prices. During depression credit is shy and it contracts much more than is justified by the decrease in volume of trade. The prices come down.

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CHAPTER XXXIV

MONEY AND PRICES

1. Introduction. We have seen in the previous chapter that the value of money is inversely related to the general level of prices. When the general level of prices goes up, the value of money goes down and conversely, when the general level of prices goes down the value of money goes up. Thus prices fell all over the world during the period of Depression 1929-1933, the value of money appreciated. During the War the value of money depreciated since prices rose in almost all countries.

A sudden change in the value of money or the general level of prices is a serious matter, since it disturbs all contracts and results in redistribution of wealth among the various classes of the people. Several problems therefore arise in this connection. First, we want to know what consequences follow from quick changes in general prices. Secondly, is it possible to measure the degree of such changes? If so how? Thirdly, what can be done to control such fluctuations in prices?

2. Inflation, Deflation and Reflation. Before we proceed further a few terms may be explained. These are generally used while talking of abnormal price changes. By inflation is meant an excessive rise in the general level of prices usually on account of an increase in the supply of money, unaccompanied by a corresponding increase in demand. When prices rise due to increased gold supply we speak of gold inflation, when due to currency notes, currency inflation and when it is caused by an over-expansion of credit, the term credit inflation is used. Mere inflation implies an excessive rise in general prices due to some, any, or all of these causes. Inflation can also result if the demand for money falls off, even though the supply remains the same. But such occasions are rare. Several European countries after World War I furnished instances of the evils of inflation. The present-day China is also passing through a similar phase where one shoe costs some millions of dollars. In Germany there was so much inflation that the German mark became practically valueless. It was fast losing value everyday so that nobody liked to receive it. If a shopkeeper got it he made his man run as fast as he could to an exchange in the street corner (there were such exchanges in every street corner) to exchange it for some foreign money which had comparatively stable value. Such a state is described as a 'flight from currency'. It was estimated that if the entire German national debt was repaid to one man, he could not buy a bench with the amount, he could perhaps buy a packet of cigarettes.

How excessive inflation turns the society upside down can be illustrated by the instance of two brothers in Germany who inherited a huge fortune from their father. One of them kept his portion in

the bank and did not touch it and the other exhausted his fortune in drinks and filled a cellar with empty bottles. When inflation occurred the thrifty brother had the disconcerting experience of finding that the purchasing power of his millions in the banks was reduced to mere nothing, whereas his thrifless brother became a millionaire by the sale of empty bottles. The effects of inflation on the middle classes were simply disastrous. They were completely wiped out.

Deflation is opposite of inflation. It means an excessive fall in prices due to contraction of currency or due to greater demand for currency.

Reflation is a moderate degree of controlled inflation. When prices have come down abnormally low, so that economic activity ceases to be profitable, the currency authority may adopt measures of putting more money into circulation, with a view to raising prices and encouraging economic enterprise. This is one of the remedies to meet depressions suggested by those who think that money factor is the primary cause of such depressions. More of it in the chapter on Trade Cycles.

It should be noted that high or low prices as such are immaterial. If all prices including prices of services double or are halved overnight it makes no material change in the economic position of the people concerned. But this never happens. Actually different prices change in different degrees. Some prices may not change at all. Some groups of prices may even have gone down. A general rise of prices merely refers to the average of the prices having gone up.

Changes in prices of individual commodities are usually the result of changes in their respective demands and supplies. But when the prices of most commodities begin to go up and do so relatively quickly the cause is usually on the side of money, an increase in the supply of money. Conversely, when most prices show a quick fall the reason is usually a rise in the demand for money in the sense explained earlier.

3. Consequences of Changing Prices. In this Tract on Monetary Reform, Keynes divides the Community in three classes :—

(i) The investing class; (ii) the business class; and (iii) the earning class, and studies how the changes in the value of money affect each. The investing or *rentier* class consists of people who have parted with their real property permanently "in return either for perpetual annuity fixed in terms of money or for a terminable annuity and the repayment of the principal in money at the end of the term, as typified by mortgages, bonds, debentures and preference shares." A rise in the general level of price hits this class hard. They can purchase fewer goods and services than before with their fixed incomes. The business or the entrepreneur class gains because while the sale prices are rising their cost of production usually lags

behind. Wages and salaries, for instance, are fixed by agreements which are not immediately revised, rent and interest charges remain the same. The earning class also stands to lose when prices rise since their wages and salaries do not move up correspondingly. Their real wages go down. But as a period of rising prices is a period of trade and industrial activity, wage earners will gain in continuity of employment.

We may also notice the effect on debtors and creditors. When prices rise the debtors gain. The debts are paid by the sale of commodities or services. In case the debtor is a producer, he will have to part with less quantity of the commodity to pay a given amount of the debt. In case he is a worker, a lesser quantity of work will be enough to discharge the debt.

When prices rise the general body of consumers suffer. Unless they belong to the category of business men, speculators or black-marketeers the scale of consumption has to be cut down when everything becomes dear.

The downward movements of prices produce opposite results on these classes. The *rentier* class gains and so does the earning class since their comparatively fixed incomes purchase more in terms of goods and services. But if there is continued depression the workers may lose on account of general unemployment. Only those lucky few gain who are able to keep employment. The business class on the other hand suffers. In the first place falling prices reduce their gross incomes from business undertakings. Secondly, the various elements of cost, like fixed charges and wages, come down if at all slowly. Their business profits are thus seriously cut down.

The debtors lose when the prices fall because they have to part with larger quantity of goods and services in order to repay a given debt. In the early 'thirties the burden of land revenue on the Indian peasant was increased manifold, when the prices of agricultural commodities fell incredibly low. The creditors, on the other hand, gain because the money that they get back buys much more than when they lent it.

The general body of consumers gain from low prices. They are able to improve their standard of living.

On the whole we might say that, broadly speaking, all debtors gain from rising prices and lose from falling prices, since their fixed monetary obligations mean more in goods and services when prices fall and less when prices rise. The creditors on the other hand gain when prices fall and lose when they rise.

Taking agriculture and industry as such the variations in prices do not affect each of them to the same degree. As the experience of the recent world depression showed prices of agricultural products tend to decline more quickly and recover more slowly than industrial products. This is due to differences in conditions of demand and supply. Agricultural operations have a slow rate of turnover since

crops must take time to grow and become available in the market. Moreover, control on supply is difficult to exercise because of the scattered nature and agricultural production units. The demand for agricultural goods also is less elastic than for manufactured goods. In the case of industries production can be controlled and output can be resisted, if necessary, much more easily.

Too much fluctuations in either direction are bad for all economic enterprise, since it creates uncertainties regarding the future expectations. Maintenance of comparative stability of prices is, therefore, necessary for orderly economic development. But before any policy can be pursued to this end it is necessary for the guidance of the currency authority to know how the price level is behaving at a particular time. This brings us to the problem of measurement of the changes in the general level of prices, or conversely, in the value of money. This is done by constructing what are called Index Numbers of prices.

4. Index Numbers of Wholesale Prices. When general prices rise the value of money falls, when general prices fall the value of money rises. In order to measure the value of money, therefore, an index number of wholesale prices is constructed. Below are given the various steps in the construction of such an index number.

(i) *The choice of the base year.* The first step is to choose a year to serve as the base year, i.e., the year with reference to which the price changes in other years are expressed as percentages. Care must be exercised in its selection. It should be an average sort of a year, neither too prosperous nor too depressed from the point of view of economic conditions in general. Sometimes an average (of prices) of a number of years is taken to serve as the base.

(ii) *Selection of commodities.* The second step is to select commodities the prices of which have to be taken to represent the general price level. The commodities should be really representative and should be sufficiently large in number.

(iii) *Price lists are then taken for each commodity.* It is better to have an average of wholesale prices of the same commodity from a number of representative markets. These prices are taken for the base year (or years) and also for the subsequent years, the index number for which we want to construct.

(iv) The next step is to represent the price of each commodity for the base year as 100, and the price of the same commodity for the subsequent years as a percentage of the price for the base year. For instance if the price of wheat for the base year is Rs. 4 per maund and is called 100 and its price for the next year is Rs. 8 per maund, it should be called 200 and so on in the case of all the commodities and all the years.

(v) The final step is to strike the average of the numbers thus obtained with reference to each of the years. The average for the base year will naturally come to 100. The other averages will be

higher or lower than 100 according as the general price level has risen or fallen respectively.

The following statement illustrates how index numbers are constructed.

Articles.	Prices in base year 1939	Index for base year 1939	Prices in 1945	Index for 1945
	Rs. per Mds.		Rs. per Mds.	
Wheat	... 4 0 0	100	10 0 0	250
Rice	... 3 8 0	100	14 0 0	400
Cotton	... 15 0 0	100	22 8 0	150
Sugar	... 8 0 0	100	16 0 0	200
Ghee	... 60 0 0	100	150 0 0	250
Average :		100		$1250 \div 5 = 250$

According to the above index number there was a rise of 150 per cent in general price in 1945 as compared with 1939. This means that in 1945 the value of money in India (on the basis of above figures) was $\frac{2}{5}$ of what it was in 1939, a fall of 60%.

5. Weighted Index Numbers. The type of index number constructed above is called an unweighted index number. Here every commodity is given the same importance. But actually to a consumer a small rise in the price of one commodity may mean a greater disadvantage than a big rise in another commodity which does not hold so much importance in his household expenditure. This fact is specially to be taken into account when we are constructing what is called the cost of living index number, i.e., the one measuring changes in the cost of living of a particular class of people.

Suppose the above articles represent goods consumed by a particular class of people, and we want to know how did the war affect their cost of living. All these articles may not be of the same importance to these consumers. To show their relative importance we can assign "weight" to each of the commodity by multiplying its index number by a certain figure indicating the degree of its importance. Such a figure is usually based on the proportion of money spent on particular commodities in typical family budgets.

The following table illustrates how a weighted index number is constructed. The same figures are taken as in the previous illustration.

Articles	Price in base year 1939			Index 1939	Price in 1945			Index 1945
	Rs. per md.				Rs. per md.			
Wheat	...	4	0 0	$100 \times 3 = 300$	10	0 0	$250 \times 3 = 750$	
Rice	...	3	8 0	$100 \times 1 = 100$	14	0 0	$400 \times 1 = 400$	
Cotton	...	15	0 0	$100 \times 1 = 100$	22	8 0	$150 \times 1 = 150$	
Sugar	...	8	0 0	$100 \times 2 = 200$	16	0 0	$200 \times 2 = 400$	
Ghee	...	60	0 0	$100 \times 1 = 100$	150	0 0	$250 \times 1 = 250$	
Total	...				800			1950
Average	...				100			243.75

Thus we have given three times importance to wheat as compared with rice and twice to sugar as compared with ghee, etc.

The cost of living on this basis has not risen as much as indicated by the unweighted index number if that was regarded as a cost of living index number. These figures, however, are only by way of illustration. Actually the same index could not be employed to measure changes in the general level of prices and changes in the cost of living. Moreover the commodities taken to measure changes in the cost of living of different classes will not be all the same. It will depend upon what commodities are usually purchased by the class concerned.

We have only chosen a few commodities. Actually a large number of commodities is chosen. For instance, the oldest series of index numbers in India is the one constructed by the Commercial Intelligence Department of the Government of India. It includes 28 exported and 11 imported articles. The series is unweighted and takes 1873 as the base year. Two more series are for Bombay (40 articles) and Calcutta (72 articles).

Weighing can be indirectly introduced by taking prices of more than one variety of a commodity, e. g., 3 varieties of wheat, 2 of cotton, 3 of tea, etc.

About 12 different cost of living index numbers are published in India from various important urban centres.

6. Uses of Index Number. The method of index numbers can be used for other purposes also. We can measure any quantitative change in addition to changes in the value of money and cost of living. There may be index numbers of wages, imports, exports, industrial activity, employment, changes in areas under cultivation, changes in population, etc., etc. These measurements indicate social and economic trends and help in framing policies with respect to them.

For instance an index number of cost of living can guide us in adjustment of wages to changing prices. Index numbers of wholesale prices can guide the currency authority in stabilizing price levels and exchanges.

We can compare with the help of index numbers, economic conditions of a class of people at two different periods.

Index numbers can be used as a basis for an equitable discharge of contracts, i.e., borrowing and lending. When prices rise the creditor is a loser, for the same amount returned to him has less purchasing power. Money after all is a mere medium of exchange; it would be more just to ensure that the creditor gets back the same purchasing power. If that is so then the amount of the principal should be increased in proportion to the increase in prices. Similarly, when the prices fall, the debtor should be asked to pay correspondingly less, otherwise the burden of the debt in terms of commodities and services will be increased in proportion to the fall in prices. It is in accordance with this policy that in almost all countries the peasant population was granted relief when there was an unprecedented fall in agricultural prices in the early 'thirties.

Index numbers are thus very useful, nay their preparation is essential for a modern community, otherwise all their economic policies will be a leap in the dark. But it is necessary to recognise that index numbers suffer from certain limitations. *In the first place*, they are just approximations. They cannot be taken as infallible guide. Their data are open to question and they lend to different interpretations. *Secondly*, international comparisons are difficult, if not possible, on account of the different base, different set of commodities or difference in their quality or quantity.

Thirdly, comparisons between different times is also not easy. Over long periods some popular commodities are replaced by others. Entirely new commodities come to figure in consumption or the commodity may be the same merely in name; it may be vastly different from what it used to be. Think of a modern railway engine and one of the early ones. Ford car 1948 is a different commodity as compared with Ford 1938.

Fourthly, Index numbers only measure changes in the *sectional price levels*. An index, therefore, prepared for a particular purpose may not be useful for another. Index number that helps us to study the economic conditions of mill-hands or railway coolies will be useless for a study of the conditions of college professors. Entirely different set of commodities will have to be selected. Different people use different things and hold different assets. Hence different classes of people are affected differently by a given change in the price level. Hence the same index number cannot throw light on effects of a price change on all sections of society.

Finally, one set of weights may yield quite a different result from another and weighing is all arbitrary.

7. The Need for Price Stabilization. Since sudden changes in the value of money or general price level, apart from their social and political consequences, cause uncertainty and dislocation in economic activity, the necessity for price stabilization is more and more realised. Price stabilization does not imply a rigid system of

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controlling price level. Such an achievement is neither desirable nor possible. Short-period fluctuations in prices cannot be entirely eliminated whether we refer to individual prices or the general price level. Moreover, changes in prices over very long periods also are not so harmful. But the evils of fluctuations in prices over fairly long periods, say twenty years or so, are quite obvious. Such fluctuations should be reduced to the minimum. These are represented by the periodic booms and depressions which we shall discuss in a separate chapter.

Price stabilization may be attempted in two ways. (i) Stabilization of the prices of important individual commodities by influencing the factors affecting their supply and demand respectively.

(ii) The second method is to tackle the problem of general level of prices by adjusting the supply of money to its demand. In this connection various ways have been suggested by various authorities. Some would prefer a gold standard system, other would like to have some sort of a managed system of paper currency.

In the modern world no country stands isolated. There are international exchanges taking place between countries. Price levels of various countries are interconnected. The values of their currencies have also relations with each other. Price stabilization, therefore, has more and more achieved the character of an international rather than a national problem.

8. Difficulties as Regards Control of Price-Level. It is usually assumed that the central bank of a country can control price level by controlling credit. This belief is based on certain assumptions which are not always true. These assumptions are (i) that it is possible to construct accurate indices of prices promptly and to use them as guides. We have already discussed the various limitations on the construction and use of index numbers. Such indices must cover a complete representative range of commodities, should be correctly weighted and be promptly available. This is not usually possible ;

(ii) that there is a close and consistent relation between quantity of money and price level. While discussing the quantity theory of money we observed that such a relationship does not exist in actual fact. In a credit economy this is all the more true. First as we shall see bank credit is not the only form of credit. Secondly credit is not used for purchasing commodities only. It may be used for buying and selling of real estate (e.g., land, houses, etc.), securities and services. Thus an increase in the volume of bank credit may be accompanied by a fall in the level of commodity prices, owing to a rise in the prices of securities and real estate. Conversely, a decrease in the volume of credit may merely depress the prices of securities and real estate while leaving commodity prices unaffected or even raising them. In Poland, for instance, according to Lewinski, quantity of money in circulation halved between 1913 and 1925 while index of wholesale prices rose by 36%. Again in the U. S. A. during

1923 to 1929 bank credit expanded enormously while commodity prices showed only minor changes. Prices of stock exchange securities and real estate, however, rose tremendously. Further, velocity of circulation may move in the opposite direction and counterbalance the effect of credit expansions or contraction carried out by the bank. The central bank has little control over such velocity. Then there is non-monetary factors which exert influence on commodity prices, e.g., climate, political and industrial upheavals, changes in technique of production, changes in fashions, population, changes in people's moods, etc. All these may nullify the bank's action.

9. Price Stabilization Not Always Desirable. Apart from all these difficulties, is the point of view that stability of price level as an objective is not always desirable. Price fluctuations have a definite function to perform in an economic system based on the free plays of competition. It is through this mechanism that the community's resources are guided to those channels in which they give maximum returns. Prices reflect the relative demands of the community. Price changes give warnings that certain maladjustments exist and these enable steps to be taken to correct them. Moreover, as Gregory and Hayek have pointed out, stable prices may bring recurrent dislocations and disharmonies in the economic structure as the experience of the U.S.A. during 1923 to 1929 showed. Moreover even if the average price level is kept stable changes in individual prices of important commodities may bring about serious dislocation in economic life. Finally, even from the point of view of social justice, stable prices are not always the best. They might ensure constant quantities of goods in settlement of debts and credits. But the same quantity of goods may mean less sacrifice in times of plentiful harvest, increased industrial output due to technical inventions. In such times justice demands that price should be allowed to fall. The same holds true under opposite circumstances.

Similar difficulties are encountered when the objective is conservation of gold reserves, stabilization of exchange or avoidance of business cycles.

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CHAPTER XXXV

CREDIT OR BANK MONEY

1. What is Credit. While discussing the forms of money we made a brief reference to credit or bank money. We noted then that credit means good opinion founded on the belief in a person's "veracity, integrity, ability and virtue." In Economics we mean by credit the confidence in a person's willingness to pay. Credit of a person depends on three C's—character, capacity and capital. It is a combination of all these qualities which goes to make a man's credit. He must be honest and fair in his dealings with others; he must have the capacity of making his business a success; and he must be a man of substance.

A very high proportion of business in modern industrial countries is carried on through credit. Credit transactions may be done in two ways :—

(i) The most primitive form of credit is merely getting an oral promise to pay. A little more advanced than this is by keeping a book account. This method of credit transaction, however, is only possible among people well known to each other, and living near each other.

(ii) The second and more common method in the modern age is giving written promises to pay on a certain date or within a fixed period of time. Their evolution is marked by four stages which also give the chief forms that they take. Book debts may be included as the first stage of credit development.

2. Credit Instruments. Book Debts, Promissory Notes, Bills of Exchange, Bank Notes, Cheques and Drafts.

Bank Notes are not, strictly speaking, credit instruments unless they are issued by ordinary banks without the authority of the State behind them. Now as a rule, only one bank, the central bank, enjoys the monopoly of note issue. Other instruments of credit are discussed below :

Promissory Note. It is the simplest kind of a credit instrument. It contains the buyer's promise to pay the seller a certain sum of money for value received. The payment is to be made after a specified period of time. The value may be received in the form of money which has been borrowed or in the form of goods that have been purchased. Such a document may be used for personal or commercial transactions. A bill of exchange is used for commercial purposes only.

Bill of Exchange. A bill of exchange is an order payable on demand or at a fixed future time addressed by one person (the creditor called "drawer") to another (the debtor called the "drawee")

instructing the latter to pay a certain sum of money (mentioned on the bill) to the former, or to the bearer, or to a specified third person (called the payee).

Distinguish here between the drawer and the drawee and the acceptor. After having been drawn, the bill is sent to the drawee or his agent for acceptance. This is done by putting a signature (or stamp of the accepting firm or house) on the bill. The bill now becomes negotiable, *i.e.*, it can be discounted or sold for money. A bill is discounted by calculating interest on its face value (the amount finally to be paid) for the period for which the bill has still to run, at the prevailing rate of discount, and deducting this from the face value of the bill. This then is the price at which the bill can be sold by the holder at any time. Thus the higher the discount rate the lower the value of the bill at the time of discounting; and the shorter the period between discounting and maturity of the bill the higher its value. When the bill matures, *i.e.*, becomes payable by the drawee, its value becomes equal to what is written on it. The usual period for which bills of exchange are drawn is three months, though they are also drawn for longer periods.

The form that a bill of exchange usually takes is given below:—
£100

DELHI,

January 12, 1946.

Three months after date pay to the order of the Imperial Bank of India Ltd. £100 for value received.

G. LALL.

F. Jones & Sons,
London.

G. Lall from Delhi has exported to F. Jones and Sons of London goods worth £100 in English money. This bill will mature after three months and three days from the 12th January, 1946, *i.e.*, on the 15th April, 1946. During this period it can pass from hand to hand by getting discounted. The advantage of this method of payment, among others, is that during the period of three months the importer will have received and sold the goods and would be in a position to meet his obligations.

The area of circulation of the bill obviously depends upon the credit of the acceptor. People get their bills accepted by well known firms (Accepting Houses) who specialise in this business, and thus make their bills circulate easily over extensive areas.

A bill of exchange is of great importance in financing trade, especially foreign trade. Moreover it is a very convenient form of investment. Its advantages thus are:—

In the first place, it enables business men to buy goods without making payments in cash. Before the bill matures the goods can be sold and money is made available for meeting the liability. Thus,

business can be carried on without the use of much capital. On the other hand, this method enables the exporter (or seller), if he wants money immediately, to acquire it by discounting the bill.

Secondly, the bill of exchange saves cost of transporting precious metals between the countries. The importer, for instance, instead of having to export precious metals can buy a bill of exchange and make his payment. Hence it is a cheaper and more convenient way of making international payments.

Thirdly, the bill of exchange enables every exporter to get value for his exports in his own money.

Fourthly, a bill of exchange is a very convenient way of investing liquid funds. Liquid funds are funds that can be easily converted into cash. A man who has a little spare money can buy a bill of exchange, and keep it with him as long as he does not need the money and thus earn interest. If he suddenly needs his money the bill can always be discounted in the market. This method is very commonly used by banks to keep their reserves liquid.

Hundi. In India bills of exchange have been in use from very early times. They are known as Hundies. A hundi is an internal bill of exchange. It helps in the finance of internal trade and remittance of money. A bill of exchange serves to finance both internal and international trade.

Hundies are of two kinds.

(i) *Darshni Hundi*, which is more or less like a cheque and has to be cashed immediately when it is presented.

(ii) *Muddati Hundi* has to be paid after a period of time specified on it. This is more like a bill of exchange.

Cheque. We have already said something about the bank note strictly speaking, is a currency and not a credit instrument. The next important credit instrument is the cheque. A cheque is an order on a bank by its client, who has already deposited (or acquired by loan) money with it, to pay the stated sum to the bearer or to the order of the person in whose favour the cheque is drawn. The former is "bearer cheque" and the latter is "order cheque." Cheques are written on prescribed forms supplied by the bank. Every cheque bears a number. The cheque must bear the signature of the person drawing it. When a cheque is crossed (by drawing two parallel lines across its breadth) it can only be deposited in the bank account of the person in whose favour it is drawn or his order in some bank. If lost, such a cheque cannot be cashed directly. A "bearer cheque" is not crossed and can be cashed by anyone who holds it, unless the bank is informed beforehand not to cash it. If it is an "order cheque" the responsibility of payment to the right person is on the bank.

Among the advantages of a cheque is that it economises money. Cheques can be created by all banks while the note issue is restricted to the central bank. Cheques can be drawn to an exact amount,

e.g., Rs. 100 10 as. 6ps. The use of cheques is facilitated greatly by Clearing House arrangements.

Draft. A draft is a cheque drawn by one bank upon another. For instance, suppose you want to remit Rs. 1,300 to your brother studying in England. You can go to one of the banks in India having a branch or an agency in London. Pay down Rs. 1,300 and at the current rate of exchange obtain a draft on the London branch or the agent of the said bank. This draft will be in English money instructing the branch of the bank concerned to pay the bearer on demand the specified amount. You send this draft to your brother in England and he presents it to the bank on which it is drawn and receives the money.

3. Clearing House. A Clearing House is an institution where cheques drawn on various banks are cancelled against one another and only the balance is paid. The working of a Clearing House is made clear by the following example. Suppose there are four banks A, B, C, D, whose accounts are cleared in a certain Clearing House. Each bank sends its representative with cheques to be cleared.

Suppose one evening the claims of these four banks on one another are as follows:—

	Rs.
Bank A : cheques on Bank B	=5,000
" " " C	=4,000
" " " D	=2,000
Total ...	11,000

Bank B : cheques on Bank C	=5,000
" " " D	=1,000
" " " A	=4,000
Total	10,000

Bank C : cheques on Bank D	=5,000
" " " A	=6,000
" " " B	=3,000
Total ...	14,000

Bank D : cheques on Bank A	=3,000
" " " B	=1,000
" " " C	=5,000
Total ...	9,000

The total sum of all the cheques to be settled is Rs. 44,000. If

we look at the credits and debits of each of the banks the position is as given below:—

Bank	Credit (is owed) Rs.	Debit (owes) Rs.	Balance + in favour — against Rs.
A	11,000	13,000	—2,000
B	10,000	9,000	+1,000
C	14,000	14,000	Nil
D	9,000	8,000	+1,000

Thus if bank A pays Rs. 1,000 to B, and Rs. 1,000 to D, the whole account is cleared. An account of Rs. 44,000 is cleared just by the payment of Rs. 2,000. Even these payments are not made in cash but by cheques on the central bank. This great advantage is obtained by the use of cheques and the Clearing House system.

In India clearing arrangements exist in the offices of the Imperial Bank in the principal cities like Calcutta, Bombay, Madras, etc.

Cheques, however, can serve only a limited circle of people known to each other or relying upon each other's credit. A cheque is no legal tender.

4. **Credit Classified.** Two classifications of credit may be noted (i) consumption credit and production credit (ii) commercial credit and bank credit.

The first classification is from the point of view of the ultimate use to which credit is put. Borrowing on credit may take place for immediate consumption, then it is called consumers' credit. Many shopkeepers sell goods to their customers on credit, since they are unable to pay in cash. The system of hire purchase also belongs to this category. Here you buy by instalments. When credit is obtained for the purpose of promoting production it is producer's credit or production credit. Here it is used as capital.

As regards the second classification, when credit is used for financing the manufacture and marketing of goods it is called commercial credit. For instance a wholesale dealer may sell goods to a retailer on the understanding that payment will be made after three months or any other period. This will mean the granting of commercial credit. Hundis and bills of exchange explained above are instruments of commercial credit.

We speak of bank credit when we refer to the creation of credit on the part of banks. For instance, a bank may create credit, in other words lend money, by allowing its customer to draw cheques up to a given amount. Against the liabilities thus undertaken the bank usually keeps only a small proportion in the form of actual cash. This is because the public has confidence in the bank's ability to meet its liabilities on demand. Bank notes issued by ordinary banks are also a form of bank credit.

5. Factors on Which Volume of Credit Depends. Credit implies borrowing and lending. There are times when borrowing and lending goes on briskly. This is the time of credit expansion. At other times the debtors or the creditors become shy and the borrowing or the lending propensity is curbed. In other words credit contracts. Thus credit-expansion and credit-contraction depend on the willingness of creditors to lend and willingness of the borrowers to borrow. This willingness is not an arbitrary thing. It is based on certain objective considerations of which the following are the principal ones :—

(i) *Trade Conditions.* If trade is good the borrowers are very keen on borrowing. They know they can make more money with borrowed capital. The creditors are not averse to lending, because at a time of brisk trade, tempting rates of interest are offered. Also, they can be sure of the return of money because profits are being made left and right.

But when there is depression credit contracts. Capital becomes shy; the business men are loath to risk investment. Although the banks may be willing to lend under Central Bank direction, the borrowers are not willing to borrow. 'You may take the horse to water, you cannot make him drink.' The reason is that business outlook is bleak and gloomy.

(ii) *Political Conditions.* The business world in modern times has become very sensitive to political happenings. When war clouds are hovering over head, few would launch new ventures. The present conditions in East Punjab are not conducive to business enterprise. A threatening speech by an influential politician frightens capital away. Peace and stability make for credit expansion. The extent of credit depends on the state of public confidence.

(iii) *Speculative Activity.* Credit expansion and speculative activity move together. When speculation is rife, credit expands and when speculators lose credit contracts. But credit is not merely the effect of speculation; it is also the cause of it.

(iv) *Currency Conditions.* A sound currency system is highly conducive to credit expansion. When currency conditions deteriorate for example when currency is debased or depreciated, as is now the case in China, credit contracts. Currency is the very instrument of credit and when the instrument itself is bad, credit cannot go on. It must shrink.

6. Utility and Functions of Credit. It will be seen from the above study that credit performs many useful functions for the economic prosperity of a country, thus :—

(i) It economises the use of metallic currency. Credit instruments serve in the place of metallic coins and thus save so much metal.

(ii) It helps in the finance of industry by making possible huge loans to business men.

possess purchasing power, but it has no liquidating power. To complete a sale ultimately the payment has to be made in cash. Once created, they believed, debts can only be cancelled by cash.

Both these views are extreme and hence only partially correct. The truth appears to be midway between the two. If credit instruments were perfect substitutes of cash they would exert exactly the same influence on price level as cash. Actually people have more confidence in cash than in credit instruments. Hence the banks have always to keep a certain proportion of their credit liabilities in the form of cash. When credit expands some cash has to be withdrawn from circulation to serve as reserve. Therefore prices do not rise to the same degree as they would have done if no cash had been withdrawn. But since only a small proportion of the heavily expanded credit is backed by cash, credit can and does lead to inflationary rise in prices if not kept within limits. And this is the danger of credit, i.e., its over-expansion.

9. Credit and Capital. Credit has been wrongly regarded as synonymous with capital. It is sometimes said that credit instruments, cheques, drafts, bills, etc., are for practical purposes money and, being used in business, they are in effect capital. This is not so. These instruments are not in themselves money. They only represent money. If I give some body a cheque, I do not give him cash. I only give him a right to get cash lying in the bank. Hence credit is not capital but it can enable a business man to get a control over capital goods like plant and machinery.

Nor does credit create capital. It only transfers capital from one person to another. This transfer is all for the benefit of the community. By means of credit wealth is transferred from those with whom it is lying-useless or those who can make a better use of it. Hence this transfer is very productive credit thus undoubtedly aids production but it is not in itself an instrument of production. It just makes that instruments available and puts in the right hands. A lends Rs. 5,000 to B. A may think he owns Rs. 5,000 and B says he has got Rs. 5,000. But Rs. 5,000 do not become Rs. 10,000. There is only one amount of Rs. 5,000. The society is not doubly rich. Credit has not created another amount of Rs. 5,000 but it has only transferred Rs. 5,000 from A to B. Credit therefore cannot be elevated to the position of an independent factor of production. *We therefore come to the conclusion that credit is not capital nor does it create capital. It only is the means of transferring capital.*

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CHAPTER XXXVI

BANKS

1. **Introduction.** In modern communities banks play a great part as creators of money and controllers of its supply as well as its demand. A bank in fact is an institution which deals in money. Broadly speaking, banks draw surplus money from the people who are not using it at the time and lend to those who are in a position to use it for productive purposes. Thus acting as intermediaries the banks make profits. Not only that, as we shall see, banks can make profits, and they do, by lending money which they do not possess. These institutions have developed, therefore, large number of very useful functions. Their development is an interesting study.

2. **Evolution of Banks.** Modern banks have developed from very small beginnings. The earlier bankers were goldsmiths. In Europe they were also money changers. These latter were the people who converted one kind of money into another. As they dealt with precious metals they had to arrange for the safety of their treasure. People with surplus money or gold gradually began to deposit their precious metals with such persons. This in a primitive way was the beginning of what is called deposit banking. The goldsmiths would issue receipts for the metal received. As everyone believed in their integrity, through experience in course of time, these receipts began to pass from hand to hand in payment of obligations instead of being first converted into gold. These receipts were the earliest bank notes.

The goldsmiths soon realised that only a small proportion of the metal deposited with them was claimed by the depositors within a given period of time. They, therefore, began to make profit by lending a part of these deposits to persons who were in need of money and possessed good security. In this lending it was not always gold that they gave but issued their receipts, which now would pass among the people as if they were gold. Thus the banks issued several times more of such receipts (notes) than the metal deposited with them.

Gradually the banking business passed from individuals to joint stock concerns. It was a long time before the state realised the danger of allowing every bank to issue notes. Gradually the note issue function was taken over from the ordinary banks in one country after another and was entrusted under strict regulation to a special institution called the Central Bank.

The banks in the meantime discovered new methods of creating purchasing power. They allowed their clients to issue cheques against the deposits outstanding to their credit. These deposits were not necessarily the money actually "deposited" by the client. They could be created by the bank allowing what are known as

"overdraft facilities" (permission to draw over and above the money actually outstanding to the client's credit) or by advancing loans against securities.

The cheque had great advantages over the bank note both for the bank and for its client. As long as the bank was sure of a safe proportion of cash reserves, it could raise a high superstructure of credit by advancing loans or giving overdraft facilities. To the client the cheques were more convenient and safe to hold and transfer. Moreover they could be drawn for any fractional amounts. No wonder that in more advanced countries like the U. S. A. and Britain by far the largest amount of transactions take place in the form of cheques.

It was thus that the various functions of banks were developed.

3. Kinds of Banks. Considerable specialisation has taken place among banks with regard to various spheres of their activities. The main types of banks are given below :—

(i) *Commercial Banks.* These are chiefly engaged in financing internal trade and carry on other ordinary banking functions of holding deposits, advancing loans and discounting bills as we shall presently see.

(ii) *Industrial Banks.* These institutions specialise in the financing of industry. They advance loans for long periods to people who carry on industrial enterprises. They are very common on the Continent of Europe where they are intimately connected with industry. In India such banks are practically non-existent.

(iii) *Agricultural Banks.* Such banks provide long-period and short-period finance to agriculture. Long-period capital is required for acquisition and improvement of land and purchase of equipment. Short-period capital is necessary for current expenditure on seed, manures, wages, etc. In India such banks take the form of co-operative societies for short-period lending and Land Mortgage Banks for long-period loans.

(iv) *Exchange Banks.* The main function of such banks is to buy and sell foreign currencies, rather titles to foreign currencies, in the form of bills of exchange, drafts, telegraphic transfers, etc. We shall deal with their activities in our chapter on foreign exchange.

(v) *Savings Banks.* These institutions give facilities to people usually of small means to save money. Post offices in India carry on this function. Of course other banks also accept savings.

(vi) *Central Banks.* A Central Bank is the most important institution in the banking system of a country. It performs functions of great importance. In fact it directly and indirectly controls the activities of all the other banks. We shall study the central banking functions in greater detail later on.

It should be noted that all these banks overlap in many respects in their functions. Their names indicate only the primary function

because the depositors do not come to withdraw money simultaneously; some are withdrawing while others are depositing. This is the usual phenomenon in a bank. The bank is thus enabled to erect a vast superstructure of credit on the basis of a small cash reserve. The bank is able to lend money and charge interest without parting with cash and the bank loan creates a deposit as we have seen above or it creates a credit for the borrower.

Similarly, the bank buys securities and pays the seller with its own cheque which again is no cash; it is just a promise to pay cash. The cheque is deposited in some bank and a deposit has been created or credit has been created for the seller of the securities not on any cash basis but just on the credit or trustworthiness of the bank. This is credit creation. The term credit creation implies a situation, to use Benham's words, when 'a bank may receive interest simply by permitting customers to overdraw their accounts or by purchasing securities and paying for them with its own cheques, thus increasing the total of bank deposits.'¹

How is credit created? As has been hinted above there are two ways in which a bank creates credit: (i) By advancing loans on the cash credit basis or by an overdraft arrangement, i.e., by permitting the customers to overdraw their accounts; and

(ii) By purchasing securities and paying for them with its own cheque.

In both these cases deposits are created (or credit is created for the borrower) and credit of the bank is embodied in a definite transaction. In all, a very small cash reserve is kept by the bank to meet obligations arising out of these transactions and the credit created aggregates to a very big amount.

Let us see the actual process. Suppose a customer deposits Rs. 1,000 in a bank. The bank has to pay him interest; therefore the bank must seek a safe and profitable investment for this amount. It must lend it to some body. But this amount is not actually paid out to the borrower; it is retained by the bank to meet its obligations, i.e., to pay to those of its depositors who need cash and draw cheques for the purpose. The banker's experience tells him that for this purpose only a certain percentage of cash reserve to total liabilities need be kept. In countries like England they keep nearly 10%. The ratio of cash to liabilities is much higher in countries like India where banking habit has yet to be cultivated. Suppose our bank in which a depositor has deposited Rs. 1,000 keep 20% cash reserve to meet the demands of deposit. This means that as soon as the bank has received Rs. 1000 it will make up its mind to advance loans up to the amount of Rs. 5,000 (only one-fifth reserve is kept). When, therefore, a business man comes to this bank with a request for a loan of Rs. 5,000, he may be sure of being granted accommodation to this extent, provided, of course, his credit is good. The bank lends Rs. 5,000 although it has cash only of

Rs. 1,000. It is here that credit comes in. This transaction is rendered possible because the borrower is not given the loan in cash; only an account is opened in his name and the amount is credit in that account. He is simply given the cheque book, i.e., the right to draw cheques as and when he needs money. Even when he draws cash, it may be deposited in another bank, for business men do not raise funds to keep them locked up in a cash box but to run their business and to make payments to their creditors. When this particular business man draws cheques on this bank to pay his creditors these cheques are passed on by them to their own banks where the amount is deposited in their account. Cash is seldom withdrawn. The banks adjust their mutual obligations through the system of bank clearing. Thus the bank has succeeded in creating a credit of Rs. 5,000 against a cash reserve of Rs. 1,000.

But the process of credit creation does not end here. The banks generally keep their spare cash in the Central Bank. A portion of Rs. 1,000, therefore, is deposited in the Central Bank which in its turn uses it as basis for similarly creating further credit. Just as the other banks go on creating credit (i.e., advancing loans on cash credit) all the time relying on their cash balances with the Central Bank, in the same manner the branch banks go on accommodating their local customers relying on the resources of the head office. The movement of credit creation thus goes apace. This is one way of creating credit.

The second way of creating credit is very simple. The bank can purchase securities without paying any cash. It issues its own cheque to pay the purchase price. The cheque is deposited in this bank or some other bank and the small cash reserve which the bank keeps will be sufficient to meet an obligation arising from this transaction too.

It is thus that on a small cash foundation vast superstructure of credit is erected.

The Limitations. From the account of credit creation given above, it would seem that 'the banks reap where they have not sown'. They advance loans or buy securities without actually paying cash. But they earn interest on the loans they give or earn dividends on the securities they purchase all the same. This is very tempting. They make profits without investing cash. This is the miracle of credit. It is the magic of bank credit that works. They would, of course, like to make as much profit, like this, as they can. But they cannot go on expanding credit indefinitely. In their own interest they will have to apply the brake and they do apply it for it is well known that the profits made by the banks are not very high. *The over-riding limitation arises from the obligation of the banks to meet the demands of their depositors.*

Benham has mentioned three limitations on the powers of the banks to create credit:

- (i) The total amount of cash in the country;

(ii) The amount of the cash which the public wishes to hold, and

(iii) The minimum percentage of cash to deposits which the banks consider safe.

As for (i) it may be said that credit can be created on the basis of cash. Larger the cash (i.e., legal tender money) larger the amount of credit that can be created. But the amount of cash that a bank may have is subject to the influence of the Central Bank. We shall study this influence in full in the next chapter. Here it may suffice to say that the Central Bank has the monopoly of issue of cash. It may increase it or it may decrease it and credit will expand or contract accordingly. The power of the Central Bank to control currency is the controlling influence on the extent of credit that the banks have the power to create.

The second limitation arises from the habit of people regarding the use of cash. If people are in the habit of using cash and not cheques, as is the case in India, then as soon as credit is granted by the bank to a borrower, he will draw the cheque and get cash. When bank's cash reserve is thus reduced, its power to create credit is clipped. On the other hand, if people seldom use cash except for very small and odd transactions, then the cash reserve of the banks is not much drawn upon and their power of creating credit remains unimpaired. This is the case in advanced countries like America; England and other European countries. There the banks hardly keep 10% cash reserve.

The third limitation is the most important. It arises from the traditional reserve ratio of cash to liabilities which the banks must maintain to ensure the safety of the concern and to retain the degree of liquidity that is considered desirable. It is very simple that when a bank creates a credit or grants a loan, it undertakes a liability. There is an increase in its liabilities and there is correspondingly a fall in reserve ratio. The bank will not let the ratio fall below a certain minimum. When that minimum is reached the power of the bank to create credit comes to an end. To grant any further credit will be risky unless the bank's experience is reassuring enough to permit the adoption of a lower percentage. Then that would be the limit.

6. **Do the Banks Really Create Deposit or Credit?** From the example given above it appears to be so. But there are economists like Walter Leaf and Cannan¹ who take serious objection to this view. They would ask 'How can the banks create credit if no one goes to borrow?' The initiative is in the hands of the borrowers. Further the borrower may withdraw some of his balance. To that extent deposit evaporates. Thus the deposit is created not by the amount borrowed but by the amount not withdrawn.

To this view we can reply by admitting that the power of the

1. See Sen and Das, 1947, p. 284.

assets the more confidence a bank will in due but lower will be its profits. Sometimes there is a certain amount of "window dressing". The banks accumulate larger proportion of cash by calling in short loans, at the time of publishing their periodic statement, though normally this proportion is much lower.

The whole banking business runs on the confidence of the people in the ability of the banks to pay their money back on demand. If such confidence is lost for any reason, there is a "run" on the bank, i.e., every one who has deposits in the bank rushes to withdraw them. No bank can face a run because all the deposits are not in liquid form. Thus it is necessary for a bank not only to keep a certain proportion of its assets liquid, but also give no occasion for people's confidence on its soundness to be shaken. Window dressing is one of the methods of giving a sense of security to the public. The best way to inspire confidence, however, is to freely give credits in times of panic. Central banks also come to the help of member banks on such occasions.

To keep the people informed of their financial position the banks are required by law to publish their accounts in the form of what is called a "Balance Sheet." A bank's balance sheet is a statement of its financial position. Usually such a statement is issued at the end of the financial year. The Central Bank, however, issues it weekly. The balance sheet consists of two columns. The column on the left hand side gives the Liabilities of the bank and that on the right its Asset. Liabilities are what the bank owes to others, and Assets are what others owe to the bank in addition to what the bank actually possesses in hand.

The following items appear in a typical bank balance sheet :—

<i>Liabilities</i>	<i>Assets</i>
Capital	Cash ..
Reserve Fund	Cash at Central Bank
	Money at Call
	Bills Discounted
Deposits	Advances to Customers
	Investments
Acceptances for customers (as per contra)	Liability of Customers for Acceptance (as per contra)
	Furniture and Fittings.
	Premises and other Property.

In the balance sheet the banks are anxious to show that their position is very sound. This they can do by keeping a big cash reserve or higher ratio of reserve to liabilities. For this purpose they call back amounts lent on call or short notice on the understanding that they may be re-lent the next day. These efforts at putting up a good show are called *window dressing*.

9. **Usefulness of Banks.** It should be clear by this time that banks are extremely useful for a modern community.

"Bankers are the custodians and distributors of the liquid capital, which is the life blood of our commercial and industrial activities, and upon the prudence of their administration depends the economic well-being of the nation."¹ Thus wrote Stephenson and Branton about the importance of banks. More concretely we may summarise the uses of banks as follows :—

(i) They create purchasing power in the form of bank notes, cheques, bills and drafts and thus economise the use of precious metal.

(ii) They make money more mobile, by being lenders and borrowers together, and by helping funds to move from place to place and person to person in a convenient and inexpensive manner, through the use of cheques, bills and drafts.

(iii) They encourage the habit of saving among the people and enable small savings, which otherwise would have been scattered ineffectively, to be accumulated into large funds and thus made available for investments of various kinds.

(iv) By encouraging savings and investment they increase the productivity of the resources of the country and thus contribute to general prosperity and welfare.

In a word without the banks the present level of economic development of the world could never be imagined.

Unfortunately banking facilities in India are extremely meagre and this is one of the causes why our natural and human resources have, not been adequately exploited.

There are special functions of very great importance that are performed by the Central Bank of a country to the study of which we must now direct our attention.

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CHAPTER XXXVII

MONEY MARKET AND CENTRAL BANKS

1. **Money Market.** We have already seen what the term market means in Economics and how this meaning differs from popular use of the term. In ordinary speech the term market refers to a particular locality or a place where the buyers and sellers get together for the business. But in Economics it does not refer to a place or locality but to the whole of the region from which the dealers are drawn. In short the term market stands for a group of exchanges, i.e., buyers and sellers of a commodity who are in direct competition with one another.

But what is a money market? Who are the buyers and sellers here and what is it that they buy or deal in? By the term money market also we do not mean a particular bazar or a square where most of the bank offices in the city may be situated. Here also we refer to group of exchangers rather than to a locality. The exchangers or dealers are the borrowers and lenders and the commodity dealt in is money. The borrowers are the purchasers of money. They want to obtain a right to it. They furnish the demand side of the money market. The sellers are the lenders of money. They constitute the supply side. The price of money means the rate of interest at which money is borrowed or lent. The lenders are generally the banks, who of course borrow too in the form of deposits from the public and borrowers are the discount houses, bill accepting agencies, financiers and other business men. Referring to the London Money Market, Thomas defines it thus:—

“In the localised sense it is taken to apply to the world famous institutions and streets which centre around Lombard Street and the Bank of England; in its wider significance it connotes the operations of all the bankers, brokers, discount houses and financiers in the city of London who transact business in the commodity—money, and its representative credit.”

2. **The Constituents or Members of the Money Market.** Who constitute the money market or who are its members? We have already hinted in the definition of the money market given above as to who constitute the money market. The membership of the money market consists of the bankers, brokers, discount houses and financiers. At the top of all is the central bank which is its watch-dog and the controller.

The constituents of the Indian money market are: Reserve Bank of India, Imperial Bank and the other Joint Stock banks, exchange banks, co-operative banks, land mortgage banks, the government postal savings banks and the indigenous bankers. There are two distinct sectors of the Indian money market: the indigenous

bankers form the one, and the modern banking institutions the other.

The Indian money market is imperfectly developed and weakly organised. The indigenous bankers who account for nearly 90% of the banking transactions stand aloof. There is no co-ordination between the two sectors. Hence Reserve Bank's power to control credit is strictly limited. There is a multiplicity of rates, and seasonal financial stringency is a common phenomenon. Another outstanding feature of the Indian money market is the absence of a well-developed bill market. Commercial banking dominates the money market and facilities for long-term credit are very meagre. The habit of hoarding and general absence of banking habit are serious obstacles in the way of proper development of the money market in India.

3. Central Bank. A central bank is an institution which is responsible for safeguarding the financial stability of a country. It holds the ultimate reserves of the nation, controls the flow of purchasing power—whether currency or credit—and acts as banker to the State.

In recent years the importance of central banks has enormously increased. This has been due to various causes: The growing interdependence of economic life within and between countries; the greater necessity of management and control of currency systems; the post-war (1914-18) confusion in currency and exchange matters; the Great Depression and the realisation that control over supply of money through central banks could avoid to a large degree cyclical fluctuations; the element of planning and regulation that has been introduced in economic systems of various countries in recent years. All these have increased the importance of an institution which could co-ordinate, control and manage the various complicated and conflicting factors, economic and financial, which affected the economic stability in the national and international fields. England established her central bank (the Bank of England) as far back as 1894. Other important countries like France and Germany had their central banks long before World War I. The Federal Reserve system of the U. S. A. was established in 1914. The importance of central banks, as already noted, was specially realised during the currency troubles that followed World War I. It was found necessary to have one bank controlling the policies (usually selfish) of the banks of the country. A monetary conference was held at Brussels in 1920, which strongly recommended the establishment of central banks in all modern industrial countries. The result is that now practically every country has a central bank. The Reserve Bank of India, which is the Indian Central Bank, was established in 1935.

4. Reserve Bank Balance Sheet. Reserve Bank of India is India's central bank and is the keystone of the money market arch. It publishes a weekly return. In England, the Bank of England Return is considered the barometer of the money market. This is

so because the London Money Market represents a closely knit and thoroughly integrated system. But this is not the case in India. Hence Reserve Bank of India Return cannot truly be called the barometer of the Indian money market.

The Reserve Bank Return issued weekly is split up into two : Return relating to the Issue Department and that relating to the Banking Department.

The Reserve Bank Return for the week ending on 10th September, 1948 was as under :—

Issue Department
(rupees in thousands)

<i>Liabilities</i>		<i>Assets</i>	
Notes issued :		A. Gold Coin and Bullion :—	
In Banking Dept.	30,74,21	(a) Held in India	42,71,91
In Circulation	12,18,01,28	(b) Held outside India	...
		Sterling Securities	7,96,14,28
		Total of A	8,39,36,19
		Ratio of A to Total	
		Liabilities	67.216%
		B. Rupee Coin	45,07,81
		Rupee Securities	3,64,31,49
		Internal Bills of Exchange and other Commercial Paper	...
Total Liabilities.	12,48,75,49	Total Assets	12,48,75,49

Banking Department

<i>Liabilities</i>		<i>Assets</i>	
Capital paid up	5,00,00	Notes	30,74,21
Reserve Fund	5,00,00	Rupee Coin	6,92
Deposits :—		Subsidiary Coin	1,59
(a) Central Govt.	2,16,43,44	Bills Purchased and Discounted :—	
(b) Other Govts.	17,31,98	(a) Internal	36,23
(c) Banks	56,98,44	(b) External	...
Bills Payable	3,98,35	(c) Govt. Treasury Bills	3,88,53
Other Liabilities	7,80,62	Balance held abroad	
		(includes cash and short-term securities)	3,08,73,40
		Loans and Advances to Governments	10,00
		Other Loans and Advances	6,25
		Investments	63,34,68
		Other Assets	2,60,65
Total Liabilities	4,09,92,46	Total Assets	4,09,92,46

Let us understand these items. Take the *Issue Department* first.

The total notes issued are a liability of the *Issue Department*. When a demand is made, it must undertake to convert them into cash. Whether these notes are in circulation in the public or with its own *Banking Department* (see *Liabilities side*) it must hold itself liable for these notes. It is worth noting that the same amount of notes (30,74, 21,000) appears on the assets side of the *Banking Department* and the *Liabilities side* of the *Issue Department*. It only means that so far as the *Banking Department* is concerned these notes are its assets. They are legal tender and the Bank can use them to meet its liabilities. But these very notes are a liability of the *Issue Department*, because it can be called upon to pay cash for them.

The total note issue (*Liabilities side*) is fully covered by the reserve shown on the *Assets side*. This reserve (*Assets side*) is a composite thing. It is composed of two sorts of assets.

A. Gold coin and Bullion and sterling securities, and

B. Rupee coin and Rupee securities. These are the securities of the Government of India as the sterling securities are the securities of the British Government.

According to the Reserve Bank Act, 1935, gold coin and bullion in the reserve must be at least worth Rs. 40 crores. In the balance sheet given here it is more than Rs. 42 crores. Another provision relating to the reserve is that the gold and sterling securities must be at least 40% of the total reserve. We find that in the Bank Return for 10th September, 1948 that we have given here this ratio is more than 67%. This shows that the position is very sound.

Banking Department. The *Liabilities side* shows Rs. 5 crores as capital and Rs. 5 crores reserve fund. This belongs to the shareholders and the Bank is liable to them for these amounts. Next item is Deposits. We notice that they are mostly public (i.e., government) deposits and deposits from Scheduled Banks. Any bank having a paid-up capital of Rs. 5 lakhs or more can apply to the Reserve Bank to be put in the schedule that the Bank maintains. The number of such banks in the undivided India was about 100. Every scheduled bank is required by law to maintain with the Reserve Bank a balance amounting at least to 2% of the time liabilities (i.e., fixed deposits) and 5% of the demand liabilities (i.e., current accounts). But the banks actually keep in the Reserve Bank much more cash than is legally required. This explains (c) Deposits from Banks. Other Deposits mean miscellaneous liabilities, e.g., undistributed salaries of the staff or any other amount which has not been adjusted for example a remittance from the Imperial Bank of India.

In the Bills payable items for separate accounts are included : Bank Drafts Payable Account, Government Drafts Payable Account, T.T.'s and Drafts Issued on Imperial Bank Account and Payments Order Account.

'Other Liabilities' comprise six accounts—discount, interest, exchange, commission adjustments and profit and loss account.

On the assets side we find notes, rupees and subsidiary coins. Bills Discounted means that the Bank has paid the holders of bills the present worth of the bills after deducting discount. When the bills mature, the Bank will realise cash and hence these bills are its assets. 'Balance held abroad' means the amounts it keeps in foreign banks. 'Other Loans and Advances' means the amounts it has advanced to scheduled banks and provincial co-operative banks. Investments are the government securities and the Treasury Bills it has purchased. 'Other assets' correspond to 'Other Liabilities' and include the same items. It also includes items like furniture, fixture and fittings, stationery and other property owned by the Bank.

5. Central Banking Principles. The principles on which a central bank is run are quite different from the ordinary banking principles. (i) An ordinary bank is run on business lines. To be able to exist it must earn reasonable profits. An ordinary bank, as long as it keeps adequate reserves, can indulge in any reasonable business of investment that brings profits. A central bank on the other hand is primarily meant to shoulder the responsibility of safeguarding the financial and economic stability of the country. "The guiding principle of a Central Bank," says De Koek, "is that it should act only in the public interest and for the welfare of the country as a whole and without regard to profit as a primary consideration." Earning of profit for a central bank is thus a secondary consideration. It works under control imposed by the law of the State and is definitely debarred from investing money in risky enterprises.

The central bank is thus not a profit or dividend hunting institution. It does not act as a rival or a competitor of other banking institutions. That is why it seldom allows interest on deposits nor can it advance money against the security of immovable property or grant unsecured over-drafts. It is primarily concerned with the maintenance of the solvency of the entire banking system of the country. It must, therefore, keep its own assets as liquid as possible.

(ii) The central bank is a reservoir of credit. All other banks and financial houses can look to it for accommodation, of course at a price fixed by it considering the national and international monetary conditions. But the central bank cannot rely on any other institution to come to its aid by supplying it with cash or taking off bills and securities off its hands.

(iii) The central bank must follow an active policy. It cannot go on passively looking as an idle spectator when anything goes wrong with the credit machine. It must take active steps to remedy the situation. For this purpose it has a resort to two weapons: (a) the manipulation of the bank rate policy; and (b) the open market operations. Their working is explained in the sections below.

(iv) For the efficient discharge of its functions the central bank is provided with special equipment :

- (a) It is given the monopoly of note issue ;
- (b) It is made a banker to the government.
- (c) It is a banker's bank.

With the position so acquired it can effectively control currency and credit which is the *raison d'être* of a central bank.

(v) Finally, the central bank should not be subservient to any political party. It must be independent of all political influence, so that it can act freely, without fear or favour, in the best interests of the nation as a whole. However, there is usually a very close co-operation between the government and the bank.

6. Central Banking Functions. What functions are more characteristically central banking functions has been a widely discussed question among economists. Hawtrey thinks that it should primarily be the "lender of last resort." Vera Smith stresses the monopoly of note-issue and Shaw regards control of credit as "the one true, but at the same time all sufficing function of a central bank." Kisch and Elkins¹ regard "the maintenance of the stability of the monetary standard" as the essential function of a central bank. It is, however, difficult to single out any particular function as the characteristic of a central bank. A recent authority² gives the following list of central banking functions :—

(1) The issue of paper currency in accordance with the requirements of business and the general public, for which purpose it is granted either the sole right of note-issue or at least a partial monopoly thereof ;

(2) The performance of general banking and agency service for the State ;

(3) The custody of cash reserves of the commercial banks ;

(4) The custody of the nation's metallic reserves ;

(5) The re-discounting of bills of exchange, treasury bills and other suitable paper offered by the commercial banks and dealers and similar financial institutions ;

(6) The acceptance of the responsibility of the lender of last resort ;

(7) The settlement of clearance balances between the banks ; and

(8) The control of credit in accordance with the needs of business and with a view to the maintenance of the monetary standard adopted by the State.

1. Kisch and Elkins : Central Banks, p. 74.

2. De Kock : op. cit. p. 15.

Briefly put a central bank acts in the following capacities :—

- (i) As the note-issuing agency.
- (ii) As the banker to the State.
- (iii) As the bankers' bank.
- (iv) As the guardian of the money market, through control of credit.

We shall now proceed to consider these functions in detail.

7. The Note Issuing Agency. In early periods of banking development, almost every bank enjoyed the right of issuing notes. This led to frequent troubles. Notes were over-issued and the resulting inflation disorganized the currency system and brought other serious economic and financial consequences. The government therefore had to exercise stricter control over the issuing of notes. Gradually the practice of entrusting this important function to the chief bank of the country, the central bank, became established. Now in almost every country the central bank enjoys either full monopoly or almost a monopoly in this respect. Such a monopoly is of great importance. It gives uniformity to the system of note-issue. Moreover the notes of a central bank have greater prestige and in times of shaky confidence are seldom presented for encashment into coins or metal. Above all, this monopoly gives the central bank control over other banks in the matter of expansion of credit, since the cash reserve form the ultimate limit of such expansion.

8. Principles of Note Issue. In the issue of notes two conflicting aims have to be reconciled. On the one hand note issue must be elastic. The circulation should expand and contract in accordance with the demands of trade. On the other hand the confidence in the note must be preserved by maintaining its convertibility. The first is the principle of elasticity and the second is that of security. This requires a proper regulation of note issue.

Currency Vs. Banking Principle. On the eve of the passing of the Bank Charter Act in England in 1844 there was a keen controversy going on as to what should be the right principle of note issue. There were two opposing schools of thought; one advocating what is known as the Currency Principle and the other the Banking Principle.

The advocates of the *Currency Principle* insisted on full metallic banking (i.e., 100% reserve). For every note issued there must be kept in the currency chest coins of the same value. In their opinion the currency note was merely a convenient and economical substitute for metallic money. It was not at all their intention that the notes should be issued beyond the extent of the reserve.

Naturally the paper currency under this system was absolutely safe. There could never be a question of the currency authority not being able to encash their notes. But this system of note issue would make the currency highly inelastic. Notes could be issued

only to the extent that the note issuing authority was able to acquire gold or silver to be kept in the reserve. The expansion of the currency was thus made to depend on the output of mines rather than the reasonable requirements of trade which should be the primary consideration.

Those who advocated the *Banking Principle* were in favour of leaving the business of note issue entirely to the discretion of the banks. This would enable them to vary the currency in response to the legitimate needs of trade. Any excess of note issue would automatically come to the banks by being presented for cash payment. They held that the banks in their own interest would maintain adequate reserve to honour these notes. No reserve requirements should be fixed by law. In their opinion the banks be safely relied upon regulating the note issue properly.

The *Banking Principle* undoubtedly made the note issue elastic because the banks were to be given unhampered discretion in the amount of notes they issued and the reserve they kept. But this system of note issue lacks safety. The banking history of England is full of instances when the lure of profits outran the bankers' discretion. There were numerous bank failures which brought ruin to them and thousands of their constituents. From experience therefore it may be said that it will not be safe to leave the whole matter in the hands of ordinary banks.

We thus find that *Currency Principle* provides safety but lacks elasticity, whereas the *Banking Principle* ensures elasticity but is wanting in security. A sound system of note issue must have both elasticity and safety. These two qualities in the note issue can be provided by a compromise between the *Currency Principle* and the *Banking Principle*. In the matter of note issue, therefore, all countries have adopted a compromise between the two principles. As a compromise two systems have emerged: (a) *Fixed Fiduciary Principle* or *Partial Deposit System*; and (b) *Proportional Reserve System*.

9. Systems of Note Issue in Different Countries. In Great Britain the *Fixed Fiduciary System* was embodied in the Bank Charter Act of 1844 as amended later. Under this system a given quantity of notes can be issued by the central bank without keeping any metallic reserves. This portion need be covered only by government securities. This is called the fiduciary limit. Notes issued in excess of the fiduciary limit must be covered pound for pound by gold. This method was attacked from time to time as lacking in elasticity. It, however, acted as a brake on over-expansion of credit. In abnormal circumstances the fiduciary limit could be extended by amending the Act. In 1928 the Treasury was given power to increase the fiduciary limit beyond that legally fixed. This gave some elasticity to the system. It was, however, objected that extension of the fiduciary limit was always interpreted as a sign of weakness. Thus it was held that elasticity was imparted at the

expense of loss of confidence. In spite of this criticism the system has survived, mainly perhaps with the force of tradition. Japan and Norway, in fact, have introduced the same system.

The Proportional Reserve System has been adopted in the European Continent, France keeping 35% and Germany 40% reserve. With modification it has been also followed by the Federal Reserve System of the U.S.A. "The essential feature of this method, which has now spread over a large part of the world" "says De Kock, is the provision of a proportional metallic reserve against the note circulation (25, 30, 33½, 40 per cent) the remainder of the notes to be covered by the trade bills and Government securities, with the further provision, that subject to certain conditions and penalties the reserve ratio may be allowed to drop below the legal minimum."¹

This system is more elastic than the Fixed Fiduciary Principle. If the bank obtains say, Rs. 40 worth of gold, it can issue Rs. 100 worth of notes under Proportional Reserve System, but only Rs. 40 worth of notes under the Fixed Fiduciary Principle, once it has exhausted the fiduciary limit. The element of safety, however, is less under this method of issuing notes.

Some people think that if the State issues notes, as was done in India until the Reserve Bank of India took over this function, the note issue can be better controlled. But in times of emergencies the notes will be over-issued whether the State does it directly or indirectly through its influence over the central bank. In fact note issue by a central bank is slightly better from this point of view, since there may be some resistance by the central bank to the proposals of the Government to use the method of printing additional notes for its finance.

So far as India is concerned the Reserve Bank of India has the monopoly of note-issue. For this purpose, the Reserve Bank like some other Central Banks (e.g., the Bank of England) maintains a separate department called the Issue Department. The assets of this department are kept distinct from those of the other departments of the bank, i.e., the Banking Department.

The assets of the Issue Department consist of silver rupee coins, Government of India (rupee) Securities, gold coin, gold bullion, or sterling securities, provided that the amount of gold coin and gold bullion is not at any time less than Rs. 40 crores in value and gold bullion and sterling securities must be at least 40% of the total reserve. With the sanction of the Central Government, the 40 per cent limit can be reduced for limited periods on payment of a specified tax on the deficiency. Thus the systems adopted in India is a compromise between the two systems discussed above.

As the experience of the recent war has shown this particular method of regulating note issue has not been able to save India from inflation. The very provision (keeping of sterling backing) which was meant to act as a brake on over-issue was the cause of

(1) De Kock, op cit., pp. 28-29.

the enormous inflation of currency that has taken place. India was paid in sterling for the various war materials purchased in India on behalf of His Majesty's Government and the Allies. This sterling was transferred to the Issue Department of the Reserve Bank in London and corresponding amounts of currency notes were issued in India. This led to an enormous expansion of note issue while the letter of the law was fully honoured. The amount of inflation that has taken place will be clear from the fact that notes in circulation increased from Rs 182 crores on 1st September, 1939 to Rs. 1,218 crores on 4th January, 1946. Correspondingly sterling securities held in the Issue Department of the Reserve Bank increased from Rs. 59 crores to Rs. 1,110 crores over the same period.

10. Banker of the State. The second important function of a central bank is to act as banker to the government. All the balances of the government of the country are kept with the central bank. On these balances usually the bank pays no interest. On the other hand the bank performs a number of services to the government. Generally speaking it is the fiscal agent to the government, and advises the latter in matters relating to currency and exchange as well as finance. "Central banks everywhere operate as bankers to the State not only because it may be more convenient and economical to the State, but also because of the intimate connection between public finance and monetary affairs."¹ As the various financial activities of the State can interfere with the conditions of the money market, the exchange rates, and credit policy of the central bank, the banking operations of the State can best be centralised in the central bank.

An important function of the central bank with respect to the State is the provision of short-term loans. This is usually done through the central bank discounting the Government Treasury Bills either directly or when presented by other banks. This is to enable government to meet its current financial obligations in anticipation of its revenues. During times of crises like war such lendings to the government can lead to serious inflation as happened in the case of France, Germany and elsewhere in Europe during and after the war of 1914-18. "History is full of example," says De Kock, "of inflation and currency depreciation resulting from credit creation on behalf of the State. In fact, experience has shown that heavy government borrowing either directly from the central bank or indirectly through rediscount, is the easiest means, and sometimes the only means, of bringing about substantial inflation."

When a central bank gives advances to the government against treasury bills or other government securities the money spent by the government is again deposited with commercial banks by those who receive payments. This in fact means an increase in the commercial banks' balances with the central bank which as we have seen are as good as cash. On the basis of this cash the commercial

1. De Kock—op. cit. p. 54.

banks are able to increase their loans and advances. Thus inflation begins. It is, therefore, necessary that the central bank should be kept independent of the State so that it may be able to resist the latter's pressure for credit in times of danger. In view of the disastrous consequences of government borrowings in some countries during and after World War I, some newly established central banks (Chile, Czechoslovakia, South Africa and India) were restricted by law in the matter of granting accommodation to the governments. But such restrictions had to be relaxed in periods of emergency.

The Reserve Bank of India performs several functions as the banker to the State. It accepts money for account of the Secretary of State, the Central Government, the Provincial Government and approved States, and makes payments up to the amount standing to their credit respectively and carries out their exchange, remittance and other bank operations, including management of the public debt.

As regards advances to the State the Reserve Bank has not been restricted with regard to such advances. But they must be repaid within three months from the date of making the advance. The bank can also buy Government securities of any currency provided the amount of such securities held at any time in its Banking Department is not to exceed the aggregate amount of share capital of the Bank, the reserve fund and three-fifths of the deposit liabilities of the Banking Department, and provided further, that securities maturing after one year or after 10 years shall not exceed certain limits.

11. The Bankers' Bank. Broadly speaking the central bank acts as a bankers' bank in three capacities :—

(i) As the custodian of the cash reserves of the commercial banks ;

(ii) as the lender of last resort ; and

(iii) as a bank of central clearance, settlement and transfer.

(i) The habit of the commercial banks keeping their cash reserves with the central bank developed slowly and it has been closely associated with the function of the central bank as the bank of issue and banker to the Government. It was convenient to keep cash reserves with the central bank because its notes commanded greatest confidence and governments' banking transactions took place through this institution. Originally keeping of cash with the central bank was optional, later in most countries it was made a statutory obligation.

The practice has many advantages. First, it economises cash. The nation's cash can be more effectively used when centralised than when scattered in the vaults of numerous banks. Secondly, it enables the commercial banks to increase their reserves merely

by discounting bills with the central bank in time of need instead of having to rely upon their own resources. Thirdly, it gives the central bank control over the credit policies of the member banks as we shall presently see

In India the scheduled banks (so called because their names are included, on basis of their paid-up capital and reserve, in the Second Schedule to the Reserve Bank Act) are required to maintain with the Reserve Bank a balance not less than five per cent of their demand and not less than two per cent of their time liabilities.

(ii) The central bank is the lender of last resort to the commercial banks. When the commercial banks have exhausted their own resources and have failed to supplement their funds from the usual outside resources, the central bank is called upon to function as the lender of last resort. It acts in this capacity mainly through its rediscount operations.

In the narrow sense rediscounting is applied only to first class trade and agricultural bills brought to the central bank by commercial banks and bill dealers or brokers, who are temporarily in need of funds and want to convert some of their short-term assets into cash. In the wider sense as now current in most countries, rediscounting is defined as "the conversion directly or indirectly of commercial bank credit into additional Central bank credit."¹ Rediscounting is thus applied also to Treasury Bills and to short-term collateral loans to banks and other financial institutions made by the central bank against bills or promissory notes and government securities.

Rediscounting facility enables commercial banks to carry on their day-to-day business on smaller cash reserves, since they can always rely upon the central bank in times of crises. It gives increased elasticity and liquidity to the assets of the commercial banks. Rediscounting, however, should not be abused. It should be only resorted to in times of emergencies not in times of normal business activity. The central bank in its turn should be ready to help in times of distress, but should be less liberal in ordinary times. This is necessary to encourage self-reliance among commercial banks and to conserve the strength of the central bank for emergencies. The mere fact that they can get help from the central bank in times of emergencies is enough to maintain the confidence of the public in the commercial banks.

(iii) The central clearing function is adopted by all central banks. In some countries it is merely a matter of tradition or convenience, in others it is a duty imposed by law. This is a logical step from the position of the bank as custodian of cash reserves of the commercial banks. Since banks keep cash reserves with the central bank, settlements between them can be easily effected by means of debits and credits on the books of the central bank. In

1. De Kock—op cit, p. 106

many countries separate clearing houses are set up to cancel mutual obligations between the banks including the central bank. In such countries the balances ultimately to be paid can be paid without cash transfers through mere book entries in the accounts of commercial banks with the central bank. If clearings go heavily against some bank its cash balances with the central bank will fall below the prescribed or traditional limit. In such a case the bank concerned can rediscount with the central bank for a few days until the deficiency in the balances is again made up.

This method of settling accounts apart from being convenient is economical as regards the use of cash. It also strengthens the banking system by reducing withdrawals of cash in times of crises. Moreover, it enables the central bank to be well informed about the state of liquidity being maintained by the commercial banks with regard to their assets. This information helps the central bank in its function of controlling the credit expansion in the country.

12. The Controller of Credit The Objectives. A central bank controls credit with the following objects in view :—

(a) To safeguard its gold reserves against internal and external drains ;

(b) to maintain stability of internal prices.

(c) to achieve stability of foreign exchanges ; and

(d) to eliminate fluctuations in production and employment.

The necessity of safeguarding gold reserves arises under a gold standard. In a gold standard country gold can be freely imported and exported and the currency of the country is convertible by law into gold coin or gold bullion. In such a country an over-expansion of credit causes inflation. High prices at home first lead to withdrawal of more cash from the banks and gold from the central bank to carry on transactions at a higher level. This is called the "internal drain". Secondly, the home price level being higher than the international price level imports are encouraged and exports discouraged. An unfavourable balance of trade is created which has to be met by export of gold. This is called the "external drain". Gold may also move out because the foreign investors have lost confidence in the future of the currency under question and they begin to withdraw their funds. The central bank, therefore, must take steps to contract credit, bring prices down and stop the internal and external drain of gold.

The second object is to maintain stability of internal prices. We have already referred to the various disadvantages of fluctuating prices. Price instability causes disturbances in economic relations, maladjustments and serious social consequences. The central bank by regulating the supply of purchasing power according to the needs of the people can reduce such fluctuations to a large extent.

Instability of foreign exchange (value of foreign money in terms of home money) disturbs international trade.

There has been considerable controversy as to which of the two objects, internal price stability or exchange stability, should the central bank prefer, when both cannot be obtained at the same time. If all the countries concerned are on gold standard stabilization of internal prices by all the countries will automatically keep exchange stable within narrow limits¹. Up to the Great War of 1914, therefore, the various countries kept stability of exchanges without serious disturbances in the price levels. During periods of inconvertible paper, however, it was found that price levels in different countries moved in different directions resulting in great disparities. Under such circumstances a country aiming at exchange stability had to let its internal price level fluctuate in response to foreign prices. This seriously upsets the whole internal economy of such a country. In recent years, therefore, the central banks have aimed more at the stability of internal prices and let exchange adjust itself as necessitated by circumstances. When other things are equal a country with greater interest in foreign trade (*e.g.*, England) would pay more attention to stability of exchange and a country with relatively small foreign trade (*e.g.*, India) would concentrate more on internal stability. One of the criticisms of the currency and exchange policy of the Government of India has been that the latter has paid more attention to exchange stability and less to the stability of internal prices.

A more recent view rejects both the aims of exchange stability and internal price stability. This view has come out of the experiences of the great world depression of the 'thirties. It is held that the central bank should aim at smoothing out of the business cycle, which results not merely from price movements. No doubt steadiness in internal prices and foreign exchange are both desirable, but they should be subservient to maintaining the stability of economic life as a whole. The aim should be to maintain a normal steady growth of business activity, and prevent booms and slumps.

13. Difficulties of Credit Control. Even if one or more of these objectives are desired by the central bank, there are serious difficulties in the way of their achievement. In the first place, there are difficulties in the way of controlling credit itself. Secondly, even if the bank is able to control the volume of credit, the objectives concerned may not necessarily be achieved.

Several difficulties in the way of controlling credit may be noted.

First, bank credit is not the only form of credit. There is commercial credit like book credit, bills of exchange and promissory notes (not discounted by banks). On these the central bank has little control. They are as much purchasing power as any other form of credit.

Secondly, even as regards bank credit all banks of the country do not have direct relations with the central bank. In the U. S. A.,

1. See "Specie Points," p. 393.

for instance, one-half of the commercial banks, with one fifth of resources are outside the Federal Reserve System.

Thirdly, even if all banks were 'member banks,' commercial banks may not always co-operate with the central bank and may not follow its lead. Such co-operation, as we shall see, is indispensable for a successful control of credit.

Fourthly, there are non-banking elements in the financial structure of a country. Among these are the various circumstances that affect the temper of the business community. There are beyond the scope of central banking action.

Finally, the central bank cannot control the ultimate use to which credit may be put. Strictly commercial loans, for instance, may be used for speculation purposes.

This, however, does not mean that any attempt to control credit on the part of the central bank is bound to fail. There are the limitations to which the action of the central bank is subject and they must be kept in mind by the banking authorities.

Even if the bank can control credit, it does not necessarily follow that the objectives of the bank like price stability, exchange stability, etc., will automatically follow. There are difficulties in their way too, which have been discussed elsewhere.

Now we proceed to discuss the methods of credit control. These are the following:—(i) Bank rate policy, (ii) open market operations, (iii) credit rationing, (iv) other methods.

Let us take these in turn.

14. The Bank Rate Policy. The *bank rate* is the rate at which the central bank of a country is willing to discount first class bills. It is thus the rate of discount of the central bank, while the *market rate* is the rate of discount prevailing in the money market among the other lending institutions. Since the central bank is only the lender of the last resort the bank rate is normally higher than the market rate. The term *rate of interest* is usually applied to the yield of long-term investments. *Deposit rate* is the rate which the commercial banks pay to those who keep deposits with them. The banks' *call rate* is the rate at which money is advanced for very short periods to the bill brokers, etc. In a perfectly developed money market all these rates bear a more or less constant relationship with each other. Before World War I, for instance, in England the banks usually fixed their deposit rate $1\frac{1}{2}$ per cent below the bank rate. The call rate was fixed usually $\frac{1}{2}$ per cent above the deposit rate to enable the banks to have a margin of profit between what they charged and what they paid. The banks charged about 1% above the bank rate on advances to their customers, subject to a minimum of 5 per cent. The relationship between the bank rate and the market rate of discount was determined by the conditions of the money market.

Under such conditions, therefore, if the bank rate was changed

all the other rates normally moved in the same direction. Though this did not always happen as we shall see.

In countries where the money market is not so well organised the relationship between the bank rate and the other rates is not so close. To that extent, therefore, the central bank is unable to influence these other rates by changing its own rate of discount.

15. The Theory of Bank Rate Policy. According to theory the changes in the bank rate of a central bank are followed by corresponding changes in all the local money rates. If the bank rate is raised the market rate and other lending rates of the money market also go up. Conversely the market rate of discount and the other rates go down when the central bank lowers its bank rate. These changes affect the supply and demand for money. Borrowings are discouraged when the rates go up and encouraged when they go down. In the former case a contraction of credit and in the latter its expansion is the result. The flow of foreign short-term capital is also affected. There is an inflow of foreign funds when the rates are high and outflow when they are low. Internal price level tends to fall with the contraction of credit and it tends to rise with its expansion. Business activity, both commercial and industrial, is stimulated when rates of interest are low and discouraged when they are high. An adverse balance of international trade can be counteracted through lowering of domestic costs and prices by contraction of credit, since this stimulates exports and discourages imports.

16. Bank Rate Policy Under Gold Standard. The theory of this policy is specially adapted to gold standard. It operated most successfully, therefore, in Great Britain before 1914. Under gold standard an adverse balance of trade is indicated by movement of exchange to the gold export point and outflow of gold. This may be due to excessive export of capital or great import of merchandise. Conversely when the balance of payments¹ is favourable there is an inflow of gold.

In the case of the outflow of gold the primary cause may be relatively high domestic cost of production, discouraging exports and encouraging imports or over-investment of capital in foreign countries caused by fear regarding the future of the home currency, or other factors, or speculative influences may be at work.

Under such conditions raising of the bank rate led to contraction of credit. This was followed by greater sale of commodities and securities since their holding became more costly due to higher rates of interest, fall in domestic demand due to fall in the incomes of various groups, decline in new investment and speculation, lowering of prices and wages. The ultimate result was encouragement of imports, inflow of foreign capital, discouragement in the withdrawal of foreign capital, etc. In due course equilibrium was restored. The outflow of gold stopped. If the policy was continued long enough

1. For "Balance of Payments". See Chap. XXXIX.

there was inflow of gold, thus relieving credit stringency, lowering money rates and reviving business activity.

Thus the raising of the bank rate has two effects : (i) *immediate* and (ii) *ultimate*. *Immediately*, borrowing is discouraged as the discounting of bills becomes a costly affair. Money therefore does not leave the banks. Instead funds flow in even from abroad as the raising of the bank rate is followed by the raising of the bankers' deposit rate. *Ultimately*, prices fall through contraction of credit and currency. Exports are stimulated and imports are checked. The balance of trade becomes favourable and gold tends to flow in. The objective of raising the bank rate is thus achieved, viz., drain of gold out of the country is checked and instead gold comes in.

Conversely, if there was a continued inflow of gold, the central bank would lower the bank rate. This would cheapen money and encourage expansion of credit, trade, production, investment and speculation. It raised domestic prices and costs, encouraged imports and discouraged exports. Investment in foreign countries was encouraged. If the policy was continued long enough an adverse balance of payment arose and gold inflow was changed into outflow.

17. Limiting Conditions of Bank Rate Policy. For a successful working of such a policy, a little reflection will show that a number of conditions had to be satisfied.

(i) All the other rates should follow the bank rate in its movement, so that credit should expand and contract as the case may be.

(ii) The economic structure of the country should be elastic so that changes in credit conditions should lead to corresponding changes in wages, rents, production, trade, etc.

In a well organised money market like that of Great Britain the first condition is satisfied.

In Great Britain, for instance, as we have seen all the other rates have a more or less constant relationship with the bank rate as a matter of convention. Sometimes, however, when surplus funds are available in the money market the bank rate may fail to be effective and other methods may have to be used. In most other countries this condition is not satisfied to any appreciable degree. Hence the meagre success of the bank rate policy there. As regards the second condition, again conditions in Great Britain were most favourable especially before 1914. The economic structure was appreciably elastic. Wages, rents and production responded within limits to changes in money rates and credit conditions. In subsequent years the British economic structure considerably lost its old elasticity. This was due to various reasons among which were the breakdown of the gold standard and coming in of the managed currency and regulation of wages and prices.

As regards other countries, the bank rate policy was always much less successful due to the absence of the above two conditions. In recent years this particular method of credit control has become

secondary even in Great Britain. This decline in its relative importance is due to changes in money market conditions and the greater rigidity of the economic system as already noted. As regards the money market several developments may be noted. Domestic trade is financed now more through bank overdrafts and less through bills of exchange which later played so much part in discounting operations. Foreign bills have also lost a good deal of their importance due to the fact that London no longer enjoys the same financial status as it used to do before the war of 1914-18. This has reduced the volume of foreign bills offered for discount in London. Moreover short-term Treasury Bills have taken the place of bills of exchange for short-term investments. This has increased the influence of the Treasury over the money market. Such changes are not conducive to the smooth working of bank rate policy.

18. Keynes View of Bank Rate Policy. According to Lord Keynes the traditional theories of bank rate concentrated largely on the influence of bank rate as a means of regulating the quantity of bank money and of protecting a country's gold reserves. It had not taken account of the influence of bank rate on the rate of investment relatively to saving, and the influence of changes in the relation between investment and saving on prices, production, employment and wages.

Keynes criticises Hawtrey who had emphasized investment but only one particular kind of investment, namely "investment by dealers and middlemen in liquid goods, "to which," adds Keynes "a degree of sensitiveness to changes in bank rate is attributed which certainly does not exist in fact."¹ According to Keynes economic situation is affected not through the changes in short-term rate of interest and in the stocks of working capital goods, but through the long-term rates of interest and the volume of fixed capital goods. Changes in bank rate lead to changes, not only in short-term rates of interest, but also in long-term rates, since the last two are interconnected. Changes in long-term rates affect the investment market. This investment depends upon prospects of profits and the long-term interest. Assuming the prospects of profits to be the same the higher the long-term interest the less attractive become investments or replacements of existing capital. When entrepreneurs spend less on fixed capital goods employment in the capital goods trades declines. This leads to contraction of total money incomes and decrease in expenditure on current consumption. This results in the decline of employment in consumption of goods trades. Prices and production fall all around. Conversely, when the rates of interest fall the opposite process is the result.

In his more recent work², Keynes still emphasizes the importance of equilibrium between saving and investment for general economic stability. He is, however, of the view that apart from regulation of quantity of money through open market operations (to

1. Keynes : A Treatise on Money, Vol. I, p. 193.

2. General Theory of Employment, Interest and Money, p. 161.

indirectly to borrow from the central bank through rediscounting bills. If the bank rate is high the market rate then cannot remain low.

21. Limitations on the Theory. It is obvious that the above will be valid only if certain conditions are satisfied. These conditions are :—

(i) When the central bank purchases securities the cash reserves of the member banks will be actually increased and conversely the cash reserves will be decreased when the central bank sells securities. This may not happen. The sale of securities may be offset by inflow of gold into the banks or by return of notes from circulation and hoards. The purchase of securities on the other hand may be accompanied by an outflow of gold or withdrawal of notes for increased currency requirements or for hoarding. In both the cases therefore the cash reserves of the member banks may remain unaffected.

(ii) But even if the cash reserves of the member banks are increased or decreased the banks may not expand or contract credit accordingly. The percentage of cash to credit is not rigidly fixed and can vary within quite wide limits. The banks will expand and contract credit according to the prevailing economic and political circumstances, not merely with reference to their cash resources.

(iii) The third condition is that when the commercial banks' cash resources increase the demand for loans and advances should also increase and conversely. This may not be so. Due to economic or political uncertainty even cheap money rates may not attract borrowers. Conversely, when trade is good and prospects of profits bright entrepreneurs would borrow even at high rates of interest.

Finally, the circulation of bank credit should have a constant velocity. But the velocity of bank deposits is rarely constant. It increases in periods of rising business activity and decreases in periods of depression. Thus a policy of contracting credit may be neutralised by increased velocity of circulation and *vice versa*.

In spite of these limitations, however, there is a fair relationship between the sale and purchase of securities by the central bank and contraction and expansion respectively of bank credit.

Since for the success of market operations it is necessary that there should be broad and active market in short and long-term government securities and such markets exist only in the U. S. A. and Great Britain, this method of credit control has been most effectively used in these two countries.

In Great Britain especially this method has been widely used with the objects of making bank rate effective, counteracting the effect of seasonal movements of funds, offsetting the inflow and outflow of gold and creating and maintaining conditions of cheap money and in the interest of business recovery.

22. Credit Rationing. Credit rationing means restrictions placed by the central bank on demands for accommodation made upon it during times of monetary stringency and declining gold reserves. The credit is rationed by limiting the amount available to each applicant. Further the central bank restricts its discounts to bills maturing after short periods. This method was used by the Bank of England as long ago as the end of the 18th century when the usury laws prohibited raising of discount rate beyond 5 per cent. In recent years, especially after the critical period following World War I, credit rationing has been adopted as a policy by a number of countries like Russia and Germany.

This method of controlling credit can be justified only as a measure to meet exceptional emergencies because it is open to serious abuses.

23. Other Methods. The other methods of credit control may be noted only briefly. There is what is called direct action. This implies coercive measures like refusal on the part of the central bank to rediscount for banks whose credit policy is not in accordance with the wishes of the central bank or whose borrowings from the central bank are excessive in relation to their capital and reserve. The central bank may, on the other hand, request and persuade the member banks to refrain from increasing their loans for speculation or non-essential activities. Law may also authorise the central bank to impose a change in the minimum of cash reserve on the member banks. Changes may also be imposed by law in the margin requirements on security loans. Finally the method of publicity is also used. This means issuing of weekly statistics, periodical reviews about the money market conditions, public finances, trade and industry, the issue of weekly statement of assets and liabilities in the form of balance sheets, etc.

24. Nationalisation of Central Banks. There is now a movement in various countries towards nationalising their central banks. It has been done in England. The Government of India has also introduced a Bill in the Dominion Parliament with the object of nationalising the Reserve Bank of India. In India even the nationalisation of Imperial Bank of India, the biggest commercial bank, is also under contemplation. Let us examine the *pros* and *cons* of such measures.

In favour of nationalisation it may be said that these banks are already regarded as public institutions. They are meant to promote national interests rather than the interests of the shareholders. A maximum limit is imposed on the dividends that the central bank can declare. The shareholders are getting just as much as the investors in government securities get. Thus in fact central banks are more or less national institutions. When they are so in fact why not make them in law?

Secondly, the government will be in a position to act more expeditiously and firmly in national interests without in any way being hampered by the consideration of the shareholders' interests. The directors will no longer represent private individuals but will be

nominated by the government. As representatives of the shareholders they have certain susceptibilities which have to be respected. But as nominees of the government their outlook will be entirely different. They will be able to bring to bear a single-minded devotion to the furtherance of national interests.

Thirdly, as the central bank pays no interest on deposits, it makes enormous profits. If the bank is nationalised all these profits go to society rather than to a private body of shareholders.

Fourthly, the central bank is mainly concerned with the government business, *e.g.*, collection of taxes and other dues, disbursements, and raising and management of government loans. It supplies currency which is particularly a government's function. It is a matter of great national importance that the currency supplied to the public is a sound one. It is therefore only in the fitness of things that the bank should belong to the government.

Fifthly, the business of the central bank is of a routine nature and is a monopoly. It, therefore, easily lends itself to State management.

Finally, in these days socialism is in the air. Nationalisation of the central bank will be a step in this direction and will meet the wishes of a large mass of the people.

The opponents of nationalisation point out the dangers of bureaucracy. It is said that banking is a commercial enterprise and must be run strictly on business principles and this the permanent State officials will be incapable of doing. Promotion is by seniority and their tenure is permanent. They lose all initiative and incentive for better work. They are tied down by red-tape.

Further, banking business is of a very technical nature and as such beyond the understanding of an average minister. He will therefore be completely at the mercy of the permanent officials.

It is also pointed out that nationalisation is unnecessary because already the central banks are run in purely national interests. The shareholders only receive the dividend which after all is not much.

But the greatest danger of nationalisation is that the central bank may be made a mere pawn in the game between political parties. An unscrupulous ministry may use it as a tool for promoting party ends as distinguished from the interests of the nation as a whole.

On the whole we may say that the proposal for the nationalisation of the central banks has much to commend itself and the dangers are generally exaggerated.

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CHAPTER XXXVIII

THEORY OF INTERNATIONAL TRADE

1. Introduction. So far we have been concerned with the problems arising out of exchange of goods and services within the same country. Now we turn to the study of problems that relate to the exchange of goods and services between persons living in different countries.

It should be noted that the difference between internal trade and international trade is only a difference of degree, not of kind. The fundamental principles in both cases are the same. International trade like the home trade is the result of division of labour. In both cases the exchange of goods takes place between persons, though in the case of international trade the parties live in different countries. Moreover international trade is regulated by very much the same principles as trade within the same country. Just as in the internal trade people specialise in producing goods in which they have the largest comparative advantage, the same happens in international trade. Similarly consumers purchase in the cheapest market both in the home and the international trade. The differences are there, but they are, as we have said above, only of degree, not of kind and that justifies our treating international trade and its problems separately.

2. Why Separate Theory of International Trade ? There are several differences, though of degree, between the home trade and foreign trade which necessitate the formulation of a separate theory of international trade. These differences may be noted :—

First, within the same country labour and capital are more mobile than they are between different countries. This has a great significance as we shall see presently. There are various reasons for this difference. As regards labour, as Adam Smith puts it, human beings are the most difficult to move. People do not move easily out of their native country even if they can command higher wages elsewhere. Many reasons are responsible for this ; differences of language, traditions, religion, customs, social and political life, etc., or mere inertia may keep them at home. Capital is more mobile than labour. But even here people prefer to invest their savings in their own country for various reasons. A foreign loan must offer a higher rate than the home loan. The investor has a greater sense of security if his capital is invested in his own country.

The result of this comparatively greater immobility of labour and capital between countries is that competition fails to make costs of production of similar goods equal as it does in the same country. This gives unequal advantage to different countries in the production of different commodities. Thus different countries become non-competing groups.

We do not mean that non-competing groups do not exist within the borders of the same country. They do, but that is not typical. Since labour and capital move easily such groups tend to disappear. This is not the case between countries. There such differences have a greater permanence.

There is another consequence of comparative immobility of labour and capital as between one country and another. Within a country, price in the long run tends to approximate to cost of production, because labour and capital can easily move into or move out of an industry if the price is more or less than the cost of production. This cannot happen in the case of international trade where cost of acquisition takes the place of cost of production. Labour and capital being immobile, price and cost of production can seldom approximate.

Secondly, differences in advantage may arise because of natural causes like geographical and climatic conditions. These lead to territorial division of labour and localization of industries. For instance some countries may have particular mineral resources like coal, iron ore and copper, etc. Others may have land or climate fitted for certain crops like jute in Bengal, etc. Either these advantages cannot be transferred to other countries or the cost of moving them is economically prohibitive.

Thirdly, in international trade certain problems arise out of the fact that countries are independent sovereigns and can pursue independent policies with respect to the movement of goods. Several kinds of restrictions may be placed on movement of goods beyond their frontiers by States for goods may not move due to physical or social barriers. Within the same country such complications do not exist or at least not to the same degree.

All these factors justify us to have a separate theory of international trade.

3. Why International Trade Arises. Why do people purchase goods from foreign countries? In other words, why does international trade takes place at all? The obvious answer is, that it is profitable to the parties concerned. This is the same reason as leads to exchange taking place within the same country. There are, however, certain conditions under which international trade becomes profitable. These are given below.

(a) A country may, due to monopoly, enjoy an absolute advantage in the production of a certain commodity. This advantage may be due to presence of certain raw materials, quality of the soil, climatic conditions or any other similar cause. Other countries then must import such a commodity. For instance India and Pakistan together have an absolute advantage in the production of jute, South Africa of diamonds, East Indies of rubber, etc. Countries which do not possess these advantages obtain these goods through international trade.

(b) Some goods may be produced in the home country but the expense involved may be prohibitive. "By means of glasses, hot beds, and hot walls," wrote Adam Smith, very good grapes can be raised in Scotland, and very good wine, too, can be made from them at about thirty times the expense for which at least equally good wine can be bought from foreign countries." Lately Germany was able to produce artificial silk, artificial petrol, etc., at enormous cost. But the reasons here were political and not economic. Normally this is not done. A country may thus specialise in the production of goods which it can produce more cheaply than other countries and get by exchange other goods which are more expensive to produce at home.

(c) It may, however, pay a country to import goods from abroad even if she could produce them more cheaply than the foreign country from which such goods are imported. This is due to the fact, that the importing country may find it more profitable to specialise in the production of some other goods in which the degree of advantage over the foreign country is still larger. This is the theory of comparative cost, which we shall further explain below. This idea may be made clear by an example. Suppose you can cook your food better than your servant. Still it may be worth your while to employ a servant for cooking, if the time and energy thus saved can be employed by you to more profitable employment in which your advantage over the cook is still greater.

4. Essential Condition of Permanent International Trade.

One essential condition of permanent international trade is the difference in the ratios of comparative costs. Take the following example:—

	Country A	Country B
Cost of production per md. of wheat	Rs. 4	Rs. 6
" " " " cotton	Rs. 10	Rs. 15
Ratio of comparative cost	1 : 2½	1 : 2½

In this case the ratio is the same (1 : 2½) in both countries (Note when you want to find the ratio of comparative cost you compare the costs of the two articles in the same country and not of the same article in the two countries). In this case permanent international trade cannot be established between the two countries. The trade will start no doubt, because both of the commodities are cheaper in A and dearer in B. A will export both commodities to B and money will move from B into A. The result will be that prices will begin falling in B and rise in A. As the ratio of comparative cost is the same, the rise of prices in the one country and fall in the other will be similar so that in the case of both commodities simultaneously the prices will be equalised and trade will come to an end.

THEORY OF INTERNATIONAL TRADE

But if the position were as follows :—

	Country A	Country B
Cost of production per md. of wheat	Rs. 4	Rs. 6
Cost of production per md. of cotton	Rs. 10	Rs. 12
	1 : 2½	1 : 2

Ratio of comparative cost

The ratio of comparative cost is different (1 : 2½ in A and 1 : 2 in B). In this case permanent international trade can be established between A and B. Here also both commodities are cheaper in A and dearer in B; the commodities will move into B and money into A; prices will rise in A and fall in B. But because the ratio of comparative costs are different, therefore in the case of one commodity they will pass each other earlier so that that commodity becomes cheaper in B and dearer in A. In this example cotton will become ultimately cheaper in B and dearer in A. Thus A will specialise in wheat because as compared with cotton wheat costs her

$\frac{2}{5}$ th, whereas to B it costs $\frac{1}{2}$ (i.e., $\frac{6}{12}$). Hence B will specialise in cotton, for to it cotton costs double as compared with wheat, whereas to A it costs more than double. This specialisation having been brought about international trade will go on uninterruptedly.

5. The Classical Theory of Comparative Costs.

The theory of comparative costs was applied to international trade in the first place by Ricardo. Ricardo pointed out that while profits in the same country in different employments tended to equalise this was not the case as between countries. The reason was that there was mobility of labour within a country but not between countries. By an arithmetical example he showed that even if Portugal could produce both cloth and wine cheaper than England, it would pay Portugal to concentrate on the production of wine in which her comparative advantage was greater and import cloth from England. He also recognized that relative or comparative costs set limits in the rate of exchange in international trade. Ricardo thus indicated merely the range or zone within which trade might take place with profit to both sides. It was J. S. Mill, however, who pointed out that between the limits set by the comparative costs the terms of exchange were determined by the relative strength of demand of each country for the goods of the other, provided at the position of equilibrium imports just paid for the exports. This balancing of imports and exports was ensured, according to Mill, by the movement of specie which took place when such balance was lacking. Mill, however, failed to notice that imports and exports could balance at more than one rates of exchange.

J. E. Cairnes questioned Ricardo's assumption that factors of production were mobile within the country and not at all between countries. He pointed out that even within the country labour was much less mobile than capital and that between countries migrations of labour and capital took place on a large scale. On the whole, however, he agreed that even though non-competing groups existed

within the same country the mobility of factors of production, was sufficient for profits to tend for the same level. This did not happen as between countries. The classical theory was thus completed with Cairnes. It was believed now that while within a country commodities exchanged in the ratio of their cost of production as between countries the reciprocal demand was the determining factor.

6. Recent Modifications of the Theory. Though the classical theory is accepted in its essentials by modern economists, certain modifications have occurred both in matter of emphasis and also as regards its manner of illustration. These modifications are worth noting.

(i) The classical economists measured costs in terms of days of labour. This was due to their belief in the labour theory of value. Since the labour theory stands rejected modern writers do not express costs of production in terms of labour. They state the theory in terms of the marginal cost of production as expressions of the degree of relative scarcities of the factors of production. Thus according to modern terminology a country tends to export those goods which are produced by the relatively more abundant factors, and to import those goods the production of which requires factors that are relatively scarce in that country.

(ii) The Ricardian theory assumed constant returns as production was expanded as a result of greater demand for international trade.

Modern writers have elaborated this simplified version by indicating the influences of the laws of increasing and diminishing returns. Thus if the greater scale of production reduces costs per unit, the comparative advantage will be increased. If on the other hand the larger output raises cost per unit the comparative advantage may diminish or even disappear. In the latter case international trade in such goods will stop altogether.

(iii) The Ricardian theory did not explain the terms of exchange. Comparative costs decide which articles will enter into international trade, but do not determine the terms of exchange, i.e., how many units of the imported product will be commanded by a given number of units of the exported product. Early Ricardians following Adam Smith relied upon the "higgling" of the market, a rather vague term. According to modern analysis the ratio of exchange is determined by the elasticities of the demand of each country for the products of the other. Thus as in our example if profitable trade results between A and B countries, the former specialising in wheat and the latter in cotton, the rate of exchange will be determined by the degree of elasticity of demand of A for cotton and B for wheat. If A's demand for cotton is more elastic than B's demand for wheat, the terms of exchange will be favourable to A or for a given amount of wheat A will receive more cotton and *vice versa*.

7. The Modern Version of the Theory. In the light of the above modifications let us illustrate the Theory of Comparative Costs in its modern version.

All trade takes place because of the differences in the cost of production. Such differences can be of three types :

- ✓(i) Absolute differences in costs.
- ✓(ii) Equal differences in costs.
- ✓(iii) Comparative differences in costs.

Trade is possible under (i) and (iii) but not under (ii). Let us take examples :

(i) *Absolute differences.*

In country A	{	Marginal cost of producing wheat is Rs. 5 per md.	
		" " " "	cotton is Rs. 10 per md.
In country B	{	Marginal cost of producing wheat is Rs. 10 per md.	
		" " " "	cotton is Rs. 5 per md.

Since price tends to equal the marginal cost of production, in country A one maund of wheat will exchange for $\frac{1}{2}$ maund of cotton. In country B one maund of wheat will exchange for 2 maunds of cotton. Thus :

		<i>Cost ratio.</i>
Country A	: 1 wheat = $\frac{1}{2}$ cotton.	1 : 2 ✓
„ B	: 1 wheat = 2 cotton.	1 : $\frac{1}{2}$

Thus A has absolute advantage in wheat and B in cotton. A will specialise in the production of wheat and B in that of cotton. A will gain so long as she can get more than $\frac{1}{2}$ maund of cotton for a maund of wheat. B will gain so long as she can get a maund of wheat for less than 2 maunds of cotton. The rate of exchange will be somewhere between $\frac{1}{2}$ md. and 2 mds. of cotton for a maund of wheat. The actual rate will depend on the relative elasticities of the demands of each party for the product of the other. This we shall see later.

Trade due to absolute advantages usually exists between temperate and tropical countries which lead to absolute advantages on account of climatic and other differences.

(ii) *Equal differences.* When the comparative advantage is equal, no trade arises between the parties.

Thus :

In country A	{	Marginal cost of producing wheat is Rs. 5 per md.	
		" " " "	cotton is Rs. 10 per md.
In country B	{	Marginal cost of producing wheat is Rs. 4 per md.	
		" " " "	cotton is Rs. 8 per md.
			<i>cost ratio.</i>

Thus in country A : 1 Wheat = $\frac{1}{2}$ cotton 1 : 2

in country B : 1 Wheat = $\frac{1}{2}$ cotton. 1 : 2.

Under the above conditions no benefit will accrue to the parties through specialisation. If A specialises in wheat and B in cotton, A can only gain if 1 md. of wheat gives her more than $\frac{1}{2}$ maund

of cotton. But B will not give more than $\frac{1}{2}$ maund of cotton for a maund of wheat, since she can produce that much at home by transferring productive resources from cotton to wheat. Even if trade starts it will come to an end after some time as explained earlier.

(ii) *Comparative differences in costs.* When the comparative advantage is different trade will arise.

Thus :

In country A	{	Marginal cost of producing wheat is Rs. 7 a md.	
		" " "	cotton is Rs. 14 a md.
In country B	{	Marginal cost of producing wheat is Rs. 5 a md.	
		" " "	cotton is Rs. 7 a md.

In this case country B can produce both wheat and cotton cheaper than country A. But the comparative advantage is higher in the production of cotton than in that of wheat. On the other hand A has a comparative disadvantage in the production of both the commodities but the disadvantage is lower for wheat than for cotton.

Thus in :

Cost ratio.

Country A : 1 md. of wheat = $\frac{1}{2}$ md. of cotton 1 : 2

" B : 1 md. of wheat = $\frac{1}{2}$ or .71 md. of cotton 1 : 1 $\frac{1}{2}$

It will therefore pay country B to specialise in the production of cotton and A in wheat

What will be the terms of trade? B will gain as long as she can get a maund of wheat by parting with less than .71 md. of cotton. A will gain as long as she can get more than .50 maund of cotton by parting with a maund of wheat. The rate of exchange will lie between

1 md. of wheat = .50 md. of cotton,

1 md. of wheat = .71 md. of cotton

The actual rate will depend upon the relative elasticities of demand of each party for the goods of the other.

If the demand of A for cotton is more elastic than the demand of B for wheat, the rate of exchange will be more favourable to A. This is so because A will be less anxious for cotton than B is for wheat. On the other hand in the opposite case the rate of exchange will be more favourable to B.

When the rate of exchange is favourable to A it is nearer the 1 md. of wheat = .71 md. cotton limit. When the rate is favourable to B it is nearer the 1 md. of wheat = .50 md. of cotton limit.

The margin of gain in this example is quite narrow. In actual practice trade will arise if the margin is fairly wide to counter-balance any inconveniences involved in such a trade.

Such is the theory of comparative costs. Then where does exactly the difference lie in its application to foreign trade?

We have said in the beginning that all trade arises because of differences in costs. In the case of the same country there is a tendency for differences in comparative costs to disappear on account of the comparative ease with which factors of production move from employments with lower rewards to employments with higher rewards. Commodities thus tend to exchange within the same country according to their respective marginal costs of production. This adjustment does not take place between countries due to obstructions in the mobility of factors of production. Thus arise permanent differences in comparative costs which make international trade profitable as explained above. But such differences in comparative costs may arise between different regions of the same country due to the lack of mobility of factors of production between those regions. Thus "non-competing groups" may exist within the same country. In that case the theory of comparative costs will apply to home trade as well. It is due to this that modern economists deny that international trade requires a special theory to explain its emergence and operation. But since differences in comparative costs are more characteristic of different countries than of the regions in the same country, special notice is taken of this theory while discussing trade between nations.

We may sum up the theory of comparative cost in general terms. An individual is able to perform many tasks but he does not do all. He selects that work which pays him most. A doctor can also do the dispensing but he does not do it; a lawyer, can perhaps type, but he does not do it; a professor can teach his son but he does not do it. All these people find it to their advantage, and it is also to the advantage of the community, that inferior work should be left to inferior person. In that case time and energy will be more profitably employed.

The same principle works in international trade. Considering climatic conditions, distribution of mineral and other natural resources, geographical position and physical configuration every country seems to be better suited for the production of certain articles rather than for others. It will be to the advantage of each country, as well as to the advantage of world as a whole, that each country specializes in the production of those commodities for which it has greater *relative* advantage. In that case productive resources of that country will be more remuneratively employed.

It is generally seen that the commodities are produced where the cost of production is the least. But this fact in itself does not lie at the basis of international trade. Rather the principle of comparative cost implies that a country may specialise in the production of certain commodities and import those articles which it can produce at a lower cost. England imports dairy products from Denmark although their cost of production in England is less. The reason is that England is able to get much better return from labour and capital invested in other directions, say machinery, and the loss from the purchase of cheese and butter is more than

made up. 'The theory of comparative costs as applied to international trade is therefore that each country tends to produce not necessarily what it can produce more cheaply than another country, but those articles which it can produce at the *greatest relative advantage i.e., at the lowest comparative cost.*'

Like other economic laws the principle of comparative cost also is a mere statement of a tendency. In actual practice the operation of the theory is hindered by frictional influences such as differences of language, custom, religion and above the unwillingness of labour and capital to be guided by purely economic considerations. They are also influenced by political motives, commercial practices and general security.

8. Why Competition in International Trade? According to the theory of comparative costs each country ought to specialise in the production of such commodities in which it has got greatest relative advantage. Each country will have its own separate sphere of productive activity. Such specialisation should lead to co-operation rather than competition, each country supplying its specialities to the other. But we find that there is often cut-throat competition in the international field leading often to bitter international rivalries, and then wars. It was Japan's industrial and commercial superiority that made England and America hostile to her. What then is the explanation?

In the first place, as we have already said above that the principle of comparative costs is a mere statement of a tendency whose operation is thwarted by frictional influences. This theory is based on the assumption of free trade which does not exist. Economic nationalism has led to the adoption of various devices like import duties, quota system, exchange control, etc., which hinder free interchange of commodities. Specialisation is, therefore, far from complete and some competition is natural.

Secondly, comparative advantage is not an established fact recognised and respected by all countries. We seldom attain a position of equilibrium or stability at which we might say that each country has established unquestioned superiority in production of certain commodities. The fact is that each country is constantly striving to attain a position of superiority: each country is trying to discover where its comparative advantage lies. Hence some commodities are simultaneously produced in different countries and competition is the result.

Thirdly, competition is more apparent than real. Competition is rendered unequal by the operation of such factors as tariff barriers, transport costs and Swadeshi sentiments. In the absence of these factors there would have been no competition.

Finally, the danger of diminishing returns stop further production of a commodity in a country and it has partly to be imported. There will naturally be some competition. If the industry had been subject to law of increasing returns the sphere of comparative costs would have become wider.

9. The Gain From International Trade. The gain from all trade, including international trade, arises on account of the advantages of division of labour. Division of labour among different countries arises on account of differences in comparative costs in addition to differences in absolute costs of production. When cost differences are equal no net advantage accrues. We may take the examples discussed in the previous section to show how this gain emerges under (i) and (iii) and does not come about under (ii).

(i) *Absolute differences in costs.* In country A (as is clear from the cost ratios) a unit of productive resources produces either 1 md. of wheat or $\frac{1}{2}$ maund of cotton. In country B a unit of productive resources produces either 1 md. of wheat or 2 mds. of cotton. If each of these countries invest two units of productive power, without specialisation total production will be

In A = 1 md. of wheat + $\frac{1}{2}$ md. of cotton.

In B = 1 md. of wheat + 2 mds. of cotton.

A + B = 2 mds. of wheat + $2\frac{1}{2}$ mds. of cotton.

If A produces wheat only and B cotton only the investment of the same productive resources will give ;

A = 2 mds. of wheat.

B = 4 mds. of cotton.

A + B = 2 mds. of wheat + 4 mds. of cotton.

Thus by specialisation the same productive resources can be made to yield a surplus of $1\frac{1}{2}$ mds. of cotton. This is the gain from trade.

(ii) *Equal differences in costs.* In the second case total production without specialisation and with specialization is the same.

Without specialization :—

A = 1 md. of wheat + $\frac{1}{2}$ md. of cotton.

B = 1 md. of wheat + $\frac{1}{2}$ md. of cotton.

A + B = 2 mds. of wheat + 1 md. of cotton.

With specialization. A producing wheat only and B cotton only :

A = 2 mds. of wheat.

B = 1 md. of cotton.

A + B = 2 mds. of wheat + 1 md. of cotton.

(iii) *Comparative differences in costs.* In the third case a surplus arises with specialization.

Without specialization ;

A = 1 md. of wheat + .50 md. of cotton.

B = 1 md. of wheat + .71 md. of cotton.

A + B = 2 mds. of wheat + 1.21 mds. of cotton.

With specialization. A producing wheat and B producing cotton only :—

A=2 mds. of wheat.

B=1.42 mds. of cotton.

A+B=2 mds. of wheat + 1.42 mds. of cotton.

surplus=.21 mds. of cotton.

This is the gain from trade. ,

10. Factors Determining the Size of the Gain. It will be clear from the above analysis that the total gain from international trade depends upon the differences in the cost ratios in the two countries. The larger the range between the comparative costs the greater the total gain. In the words of Harrod :

"A country gains by foreign trade if and when the traders find that there exists abroad a ratio of prices very different from that to which they are accustomed at home. They buy what to them seems cheap and sell what to them seems dear. The bigger the gap between what to them seems low points and high points, and more important the articles affected, the greater will the gain from trade be."¹

As regards the share of this gain accruing to the parties this will depend also upon the terms of trade, i.e., the ratio in which wheat exchanges for cotton in our example for instance. This ratio as we have explained depends upon the elasticities of the demand of one country for the goods of the other or the intensity of reciprocal demands. Whoever is more keen to purchase or sell will be the loser in the bargain.

The gain from international trade will be shared through the level of money incomes in the countries concerned. These levels also will indicate which country is getting a better bargain. A country will have a high level of money incomes if its goods are in constant demand in the outside world. Greater foreign demand will tend to raise wages in export industries. The prosperity of such industries will affect favourably the wages in other industries too. Competition will compel these other industries to bring their wages to the level of export industries. Failing this labour will tend to move to industries offering higher wages. Thus all incomes will tend to rise. Though domestic money incomes will thus rise, the prices of foreign goods will be low and people will gain as consumers of foreign goods. Conversely a country whose demand for foreign goods is high will tend to have low money incomes but will have to pay higher prices for foreign products.

11. The Real Nature of Comparative Costs. While dealing with value we had occasion to explain what is regarded as the real nature of costs by modern Economics. All costs are transfer or alternative or opportunity costs, except in the case of those factors which are specific to one particular use, i.e., cannot be put to any

1. Harrod : *International Economics* : p. 34.

alternative use. Comparative costs can also be explained in similar terms.

While explaining the theory of comparative costs we referred to money costs of production. But ultimately speaking money costs merely reflect the exchange relations between goods that lie behind them. What are then the real costs. For Ricardo real costs were labour costs. But he only took account of one particular factor of production, namely homogeneous labour. Cost of production consists of several factors which are of different kinds and grades. Some of these factors are specific (*i.e.*, can be put only to a single use) others have alternative uses. All these must be taken into account if a satisfactory theory is to be evolved.

Costs that determine exchange relations are essentially opportunity or relative costs. These costs arise because resources in a country are scarce in relation to the demand for them. If the resources are used for one purpose they have to be withdrawn from another purpose or alternative use. If for instance certain resources are used for the production of wheat they cannot be used also for the production of cotton assuming the latter to be the alternative use. Now suppose that in a certain country to obtain a maund of wheat resources have to be withdrawn from the production of cotton so that $1\frac{1}{2}$ maunds of cotton is to be sacrificed. In that country, therefore, 1 maund of wheat costs $1\frac{1}{2}$ maund of cotton. The ratio $1 : 1\frac{1}{2}$ is the ratio of costs between the two commodities. We can term this as comparative cost ratio or opportunity cost ratio or substitution cost ratio because this indicates the rate of substitution of one commodity for another.

These substitution ratios are likely to differ from one country to another. This is because different factors of production are found in different degrees of scarcity in different countries. If factors could move freely from one country to another these degrees of scarcity would have tended to equalise. But since, due to the reasons already noted, factors are not so mobile between countries these differences remain and hence create more or less permanent difference in comparative cost ratios. Thus international trade is made possible. Thus if country A in our example has to sacrifice one maund of wheat in order to produce $1\frac{1}{2}$ maunds of cotton and if it can acquire more than $1\frac{1}{2}$ maunds of cotton from country B where the substitution ratio is different by offering a maund of wheat, it will be profitable for A to produce wheat only and get cotton by exchange. Similar reasoning will apply to country B.

It should be noted that substitution ratios need not necessarily remain constant in any one country. They may change on account of the operation of the laws of increasing or diminishing returns as the output changes.

The argument that we have developed in relation to two commodities and two countries can be extended without contradicting the essential principle to embrace more than two commodities and countries.

12. Advantages of Foreign Trade. We may now refer in a general way to the various advantages that accrue to countries engaged in foreign trade.

(i) In the first place is the great advantage we have already considered above. This springs from the principle of division of labour as applied between the various countries. Foreign trade enables countries to specialise in the production of those goods for which they are best fitted or in the production of which they enjoy the greatest advantage. This leads to the production of goods under the most favourable conditions and thus increases the total wealth and welfare of the world.

(ii) From the point of view of the consumers foreign trade enables them not only to enjoy the products of foreign countries which their own country could never produce, but also to get their requirements from the cheapest markets of the world. The very fact that goods are imported from abroad shows that their price is cheaper than of a similar home product.

(iii) During times of famines and scarcity foreign trade enables the people of a country to maintain their life and health through importation of food from abroad. In the absence of foreign trade such famines would mean death of millions as happened in 1943 in Bengal when Burma rice could not come due to war conditions.

(iv) The fear of foreign competition keeps the producers at home up to date in their methods of production. Moreover, it tends to prevent monopolies and promotes competition generally. This keeps prices comparatively low for the consumers.

(v) By foreign trade countries which lack essential raw materials can acquire them through imports. This encourages industrial development in lines in which the countries concerned are otherwise well equipped. Moreover, it leads to utilization of raw materials to the best advantage.

13. Disadvantages of Foreign Trade. The above advantages, however, are counterbalanced to some extent by disadvantages.

In the first place, foreign trade may lead to exhaustion of essential materials and minerals of a country which cannot be replaced. For instance, many of the important minerals of India like manganese, mica, etc., have been exported from the country more or less in the original state. India has got very little benefit out of them. If they were conserved they would have brought better returns when India became industrialised at a future date.

Secondly, foreign trade exposes home industries to outside competition and even to dumping of foreign goods. The decay of the Indian handicrafts during the 19th century seriously disturbed the balance of our economy and increased pressure on land. This happened after the country was exposed to foreign competition by the development of means of communication and transport. The same

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foreign competition seriously obstructed Indian industrial development on modern lines and thus perpetuated the medieval character of our economy.

Thirdly, foreign trade may adversely affect the consumption habits of a country through the importation of harmful commodities. China suffered a lot on account of the opium trade during the last century.

Fourthly, through the operation of the law of comparative costs a country tends to specialise in the production of only a few commodities. This seriously curtails the number of occupations available to the people. Such over-concentration is bad for the stability of a country's economic life.

Finally, foreign trade makes a country's economy seriously dependent upon other countries. If due to war or any other causes goods cannot move freely in and out of the country its economic life may be paralysed. Moreover, any disequilibrium in the field of finance and industry tends to spread to other countries having trade relations with it. The Great Depression of 1929-32 became universalised because of the economic interdependence of the entire world brought about by international trade relations.

On the whole, however, the advantages of foreign trade more than counterbalance its disadvantages. Paradoxically enough, most of the advantages of foreign trade accrue only when goods are allowed to move without any obstructions between the countries. In other words they are mostly the advantages of free trade. At the same time free trade also gives rise to most of the disadvantages. It is necessary, therefore, to study more closely the implications of free trade and its opposite policy, protection.

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- (i) Haberler—International Trade.
- (ii) Heuser—Control of International Trade.
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- (iv) Bertil Ohlin—Inter-regional and International Trade.
- (v) Brij Narain—Principles of Economics, p.p. 159-77.
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- (vi) Taussig—International Trade.
- (vii) Hanod—International Economics.
- (viii) Thomas—Elements of Economics, p.p. 468-84.

CHAPTER XXXIX

FREE TRADE VERSUS PROTECTION

1. **Introduction.** In the previous chapter we were mainly concerned with the theory of international trade, i.e., the basic reasons why nations traded with each other. In the present chapter we shall discuss certain matters of policy. Should the goods be allowed to move freely into and out of the country or should certain restrictions be placed on such movements? If restrictions are placed, under what circumstances and in what forms are they justified? Moreover, we shall see how the various countries of the world have actually behaved in this matter.

2. **The Theory of Free Trade.** A policy of no restrictions on the movement of goods between countries is known as the policy of Free Trade. Restrictions placed with a view to safeguarding home industries is the policy of protection. Taking free trade first, in the words of Adam Smith, this term has been used to denote "that system of commercial policy which draws no distinction between domestic and foreign commodities and therefore neither imposes additional burdens on the latter, nor grants any special favours to the former."¹ Free Trade, however, does not require the removal of all duties on commodities. It only insists that they shall be imposed exclusively for revenue, and not at all for protection.

As a practical policy free trade is based on the theory of international trade already examined in the previous chapter. In the words of Cairnes, "If nations only engage in trade when an advantage arises from doing so, any interference with their free action in trading can only have the effect of debarring them from an advantage."² Long before that wrote Adam Smith: "If a foreign country can supply us with a commodity cheaper than we ourselves can make, better buy it from them with some part of the produce of our own industry, employed in a way in which we have some advantage." He continued further: "Whether the advantage which one country has over another be natural or acquired is in this respect of no consequence. As long as one country has those advantages and the other wants them, it will always be more advantageous for the latter rather to buy of the former than to make."³ The only exception that Adam Smith would make was industries necessary for defence. These might be protected since defence is more important than opulence. The doctrine of free trade is the extension of the doctrine of division of labour to the international field. In the words of Adam Smith again "individuals

(1) Quoted by Pelgrave: Dictionary of Political Economy. Vol. II. p. 143.

(2) Cairnes: Leading Principles of Political Economy. Pt. III, Chap. IV, Sec. 1.

(3) Wealth of Nations, Bk. IV. Chap. II.

and it for their interest to employ their industry in a way in which they have some advantage over their neighbours." And, he adds, "what is prudence in the conduct of every private family can scarce be folly in that of a great kingdom." In short the free trade theory is that such a policy enables every country to devote itself to those forms of production for which it is best suited on the basis of comparative advantage.

3. England the Champion of Free Trade. The free-trade-versus-protection controversy emerged in England early in the 19th century after the end of Napoleonic Wars. The free trade argument met with success due to several circumstances of the times. Among these were : (i) Industrial Revolution came first in England and gave English industry a start over other countries. The new industrial class wanted cheap raw materials, wage earners cheap food and manufactured products cheap markets. (ii) The Reform Act of 1832 gave the new commercial and industrial classes political power.

Various measures were thus passed for the removal of restrictions on trade. An Anti-Corn-Law League was formed at Manchester in 1838-39 under the leadership of Richard Cobden and John Bright. The Irish Potato Famine helped the League and Corn Laws, which restricted the importation of food grains into England, were repealed and the reforms of tariff in 1853, and 1860 removed protection from the British fiscal system.

England imposed her free trade doctrine in India too with serious consequences on the latter's handicrafts, which fell victim to the competition of cheap machine-made goods from Great Britain. For short periods free trade propaganda was popular in France and Germany but soon reaction appeared.

England was a free trader because it suited her interests. Other countries that entered the industrial field after England could not flourish on the free trade philosophy. Reaction in favour of protection came first from the U. S. A., later from Germany and subsequently from other countries. India adopted a policy of discriminating protection from 1924. Even England in the face of newly developed rivals had seriously to modify her free trade position during the last world depression.

4. The Rise of Protectionism. The term protection is used to denote a policy of encouraging the native industries by the use of bounties or by the imposition of high customs duties on foreign products. The object is to build up great national industries even by sacrificing utilities on the part of existing consumers. Political considerations are mixed up with economic ones in the protectionist theory and practice. "The need for maintaining economic independence, the danger of 'invasion' of foreign goods and 'tribute' paid to foreign producers from whom goods are purchased—such are well known protectionist pleas which show by their form that they have originated in a time of international conflict."

But a still deeper and wider element is the sentiment of nationality. "To the loyal citizen the promotion of native industry and economic interest seem a duty nearly as imperative as the defence of the national territory against invasion." The most powerful arguments in favour of protection are thus political and not economic. "The advantages of diversified industry, of husbanding national resources, or of maintaining certain industries that would disappear under free trade are not believed to be mainly economic."¹

Probably the earliest statement of the protectionist theory in its modern form is contained in the famous Report on Manufactures (1791) of the American statesman Alexander Hamilton. In it he strongly recommended encouragement of home industries for greater variety of employment, greater enterprise and in the interests of defence and security of the nation. He laid down tests for determining what industries should be assisted: (i) existence of necessary raw materials, (ii) extent of possibility of substituting machinery for labour, (iii) practicability of the policy, (iv) existence of markets at home, and (v) importance for defence. Thus he developed the famous infant industries argument.

Protectionism appeared in the U. S. A. early in the 19th century for various reasons. Revolutionary and Napoleonic wars caused interference in commerce with England which was the main source of manufactures. Again commercial relations were suspended during the war of 1812-15. This gave American industries opportunity to establish themselves, especially in the north-eastern part of the country. Some of them suffered from British competition when trade was resumed. It was because of this that protectionist arguments appealed to the people of America after 1815. In the State of Pennsylvania a leading school of protectionists arose under the leadership of Henry Carey. Carey supported protection among others on the ground that it leads to diversification of employment while specialization under free trade compels the whole population to employ themselves in scratching the earth, in the carriage of merchandise or in the work of exchange."² He also advanced the argument that the export of agricultural commodities led to the exhaustion of the soil. S. N. Patten (1852-1922), another American Economist, used similar arguments in favour of protection.

In Germany, Frederick List upheld protectionism on similar grounds. Protectionism in Germany was the child of the nationalist philosophy of that country. German national philosophy originated quite early. In 1800 Fichte had developed the idea of a self-sufficient nation. Hegel stressed the political end of the State in contrast to the individual's interest. List was the logical result of this philosophy. List stressed not the wealth of the individual but the good of the State. He criticised Adam Smith on the ground that he was too cosmopolitan materialist, and individualistic, and that he ignored the nation, which was the vital link between the individual and humanity. List further argued that what was

1. Ibid.

2. Carey : Principles of Social Science. Vol. II, p. 242.

good for England was not necessarily good for other countries, because of the different stages of their development. He stressed the necessity of diversification of industry. "A nation which only carries on agriculture," he wrote, "is an individual who in his material production lacks an arm."¹

These ideas passed from the U. S. A. and Germany to other industrially backward countries and contain the main arguments in favour of protection. These now may be stated.

5. Arguments for Protection. The main arguments that are usually advanced in favour of protection are discussed below: —

(i) *The Infant Industry Argument*: J. S. Mill in England accepted only one argument in favour of protection, i.e., the infant industry argument. In Mill's words it ran thus: "A protecting duty continued for a reasonable time, might sometimes be the least inconvenient mode in which a nation can tax itself for the support of such an experiment (introducing new industries). But it is essential that protection should be confined to cases in which there is good ground of assurance that the industry which it fosters will after a time be able to dispense with it."²

This argument is accepted by most economists. The argument is that if an industry is given a fair period to develop unhindered by foreign competition, it will reach maturity and will then enjoy the various economies of scale, until it will be able to stand on its own legs without protection.

This argument specially applies to countries that enter the industrial field at a later stage. They possess potential advantages which may not become effective unless foreign competition is excluded for a period of time.

The argument, however, has not been universally accepted. It is mainly attacked on two grounds: (a) that once an infant always an infant. Once protection is given vested interests are created and it becomes almost impossible to withdraw it, (b) that all sorts of industries begin to claim protection once this basis is admitted. The result is political corruption.

In spite of these weaknesses the argument has been widely accepted and many countries have industrialised themselves through protection given on the basis of this argument, e.g., the U. S. A. and several British Dominions including India.

The advocates of free trade say that free trade is the ideal and protection at best is only a temporary expedient.

(ii) *Diversification of Industry Argument*. This argument was advanced among other writers by Frederick List in Germany. According to it a nation should have a variety of sources of production and employment. It is necessary for keeping a balanced economy. Depending on one industry or a few industries is dangerous, both politi-

(1) F. List: *The National System of Political Economy*, p. 130

(2) J. S. Mill: *Principles of Political Economy*, Bk. V, Chap. 10, Sec. 1,

cally and economically. Politically it means too much dependence on foreign trade which may be cut off during a war. Economically, a country depending on a few industries is exposed to the danger of serious economic dislocation in case some adverse circumstances affect such an industry. For countries purely depending on agriculture diversification is very essential. Agriculture gives comparatively lower incomes and also keeps a country weaker in defence. Moreover, agricultural countries have much less chances of cultural and social advancement due to the nature of this particular way of earning a living. The argument applies to India with great force.

But it must be recognised that this argument cuts at the root of the principle of comparative cost according to which each country must specialise in the production of certain articles. According to this argument we advocate production of even those articles in which the country may not have comparative advantage.

(iii) *The Employment Argument.* It is argued that industrial development through protection increases employment in a country. Conversely, if protection is not given to old established industries foreign competition may ruin them and create unemployment in the country. The decay of the Indian handicrafts during the 19th century as a result of foreign competition, and the resultant unemployment and distress among the artisans is a case in point. Free traders meet this argument by saying that protection does not increase total employment, it merely transfers employment to the protected industries at the expense of old industries. Conversely, if through foreign competition old industries have to disappear the people set free can move to export industries for which the country concerned possesses greater comparative advantage or to migrate to other lands. This reasoning, however, assumes that labour and capital can easily move from industry to industry or country to country. In actual fact due to economic friction this happens very slowly. It also assumes that the productive resources of the country are already full employed, whereas in a country like India there is a chronic under-employment of such resources.

✓(iv) *Conservation of National Resources.* Carey and Patten had argued that free trade resulted in the export of agricultural commodities from America and thus led to the exhaustion of the soil. Jevons in England applied the same argument against the export of coal which exhausted coal fields. The same argument has also been applied in the Union of South Africa regarding gold mining and in India regarding export of manganese and mica.

The argument has force because if a country exports its exhaustible materials in the raw state it not only loses the profits of manufacture but may be seriously handicapped when the materials have been altogether exhausted.

✓(v) *The 'Defence' Argument.* Adam Smith remarked that 'defence was better than opulence.' It is said that it is essential to make a country militarily strong and invincible even though it may

not be economically prosperous. Hitler preached to the German nation 'guns are better than butter.' According to this argument a country must actively encourage the development of those industries which are essential from the point of view of defence, even though it may result in uneconomic distribution of the national resources.

The advocates of free trade point out that this is politics and not economics. On purely economic grounds, they say, free trade is the best.

(vi) *The 'Revenue' Argument.* Protection is also advocated for revenue purposes. When protective import duties are imposed, they certainly bring revenue. Customs duties in India have been fairly productive.

But it may be pointed out that there is a certain degree of antagonism between the revenues and protection. If you give full protection, then you will not get any revenue, because full protection will mean that our goods have driven out foreign goods. When foreign goods do not come in, there will be no revenue from import duty. On the other hand, if you want revenue, then foreign goods must come in and compete with our goods, and our industries then do not get any protection. This antagonism, however, arises between maximum protection and maximum revenue. But if the duties are moderate then they will yield revenue besides giving some protection. It is, however, much better to advocate protection for the sake of protecting industries rather than for raising revenues.

(vii) *'Key Industry' Argument.* If industrial structure of the country is to be stable and sound, it must develop 'key' or basic industries, otherwise the foundation of industries will have been laid on sand. The country may not have any comparative advantage on such industries, but as they have to be developed, protection must be granted to them.

(viii) *'Patriotism' Argument.* Protection is advocated on patriotic grounds. It is the duty of every citizen to use the home-made goods as far as possible. We must, therefore, develop our industries, through protection if necessary, so that home-made goods in the right quantity and quality are made available for use. There was a widespread swadeshi sentiment in India in the first decade of the present century and it hit hard foreign goods, especially the British goods, as swadeshi was being advocated as a weapon to win freedom.

(ix) *'Self-Sufficiency' Argument.* Another argument in favour of protection is that we should become self-sufficient and may not have to depend on other countries for our necessities. Such a dependence proves very dangerous during war when foreign trade is cut off. This argument has a peculiar force at present, because war clouds are constantly threatening overhead.

Protection also becomes necessary against unfair competition from abroad arising from dumping, depressed exchange rates, bounties, etc.

6. Arguments Against Protection. Let us now look at the other side and see what can be said against the policy of protection.

✓ (i) Vested interests are created. Once certain industries are given protection, then they claim it as a matter of right and it becomes very difficult to take away protection. The 'infants' begin kicking if you touch their interests in any manner.

✓ (ii) Protection produces lethargy and acts like an opiate. Foreign competition having been removed, it sends the home manufacturers to sleep. They do not try to improve, and technical progress comes to a standstill.

✓ (iii) Then there is the danger of corruption. The industrialists bribe legislators so that protection is not taken away. This evil was rampant in America at one time.

✓ (iv) Protection creates monopolies. Tariff is said to be the mother of trusts. When foreign competition has been removed, the home manufacturers are tempted to combine to reap monopoly profits.

✓ (v) Consumers and unprotected industries suffer. This is so because imposition of import duties, invariably leads to the rising of prices.

✓ (vi) The distribution of wealth becomes more unequal. The system of protection favours the rich capitalists who grow rich still and the gulf between 'haves' and 'have-nots' is widened still further.

(vii) Protection leads to conflict, friction and retaliation in the international dealings. It thus breeds the germs of future wars.

✓ (viii) The most important argument against protection on economic grounds, is this that it hampers the international division of labour so that labour, capital and other factors of production are not diverted to the most remunerative channels. Their distribution is not governed by natural economic forces but they are artificially forced to follow certain lines. The result is that they do not make their utmost contribution in the world production of commodities. The world output is lower than it can be so that the standard of living is necessarily lowered. A natural movement towards world prosperity is hindered.

To this argument it may be replied that so long as world citizenship does not come into existence, the economically backward countries must safeguard their interests against the cut-throat competition from the economically powerful countries. On the whole, therefore, we come to the conclusion that in theory free trade may be the best, but in practice protection is in some cases essential, especially in the case of economically undeveloped countries like India.

7. Discriminating Protection. In India a special variety of protection was introduced in pursuance of the recommendations of the Indian Fiscal Commission (1921-22). The late L. Harkishan Lal,

the greatest business brain and industrial magnate that the Punjab has produced, presented to the Commission a precept, "Protect the infant, feed the child and free the adult." The Commission recommended the policy of Discriminating Protection. Industries were not to be granted protection indiscriminately but only those industries were to be protected which, after full inquiry and due deliberation, were found to satisfy the following main conditions :—

(i) The industry must enjoy natural advantages in raw materials, labour and the home market.

(ii) The industry must be such that it cannot develop, or develop so rapidly as is desired, without protection.

(iii) That the industry can eventually stand on its own legs and face world competition.

This is the triple formula that an industry seeking protection must satisfy before it could claim protection. This formula has been very severely criticised by Indian economists.¹ It is said to be half-hearted, halting, dilatory, mutually contradictory and too rigid. Few industries in any country can satisfy the first condition. In other countries, they rely on foreign sources for the supply of raw materials and foreign markets for the disposal of their products. Why should India be tied down to the home market and the home materials? To say that supply of suitable labour should be available for developing industry is to place the cart before the horse. There must be industries first in existence before trained labour supply can be made available. Further, if the first condition is satisfied the second becomes superfluous. The third condition is a matter of mere personal opinion. Also, the formula does not provide for embryo industries.

There is no doubt that India has been able to save several industries from ruin and bring them to a stage of maturity by means of this policy of protection. But if the formula had been less rigid or if it had been more sympathetically interpreted then our industrial progress would have been accelerated. Industrialisation in India is still of a primitive type in spite of protection extending over a quarter of a century.

8. Recent Tendencies Towards Economic Nationalism. During the two decades following World War I protection took a new complexion. Economic Nationalism or Economic Self-sufficiency became the craze. The motive ultimately was partly political and partly economic.

Locke and Adam Smith had based their philosophies on individualism. Hegel and his followers gave importance to the State. In England Bentham and other Utilitarians also accepted the possibility of wide State action to promote the greatest happiness of the greatest number. As time passed on collectivist tendencies grew more and more both as a reaction against the abuses of individualism and as a logical result of the growing complexities of economic life. In addition the State became more and more an organ of intense

¹ See B. P. Adarkar—Indian Fiscal Policy.

(1) *Legislative Prohibition.* Sometimes import or export of certain commodities are prohibited by law or allowed only under defined conditions. For instance, there are "sanitary regulations." The United States once excluded beet from a certain region in Argentina where foot and mouth disease attacked cattle. Later the embargo was extended to the whole of Argentina. Sometimes countries indirectly curtail imports by refusing to export certain materials until they have been processed at home. "Rumania did not let her oil go out except on the condition that it be first refined at home, while Hungary will not admit Rumanian oil except on the condition that it be refined after it is received."¹

(2) *Exchange Control.* Exchange control implies government interference with the buying and selling of foreign exchange. In this way foreign trade is curtailed and driven into new channels. Government may "allot" exchange or ration it out so that importers can buy only a limited amount of goods in foreign countries. Or they may "block" exchange. For instance an American exporting goods to Germany may be required to use the marks exchange thus obtained in purchasing goods in Germany. Another way is known as exchange "clearing." Thus a German buying goods worth \$1,000 from America may be required to deposit this amount in a German bank, while a German selling goods worth \$1,000 to an American may draw on this bank for payment. In this way an attempt is made to carry on foreign trade without the use of foreign exchange.

(3) *Customs Duties.* This is an old method and consists in imposing import or export duties on goods coming into or going out of the country, respectively. Import duties are more common than export duties. A duty is said to be specific when it is imposed according to a standard of weight or measurement, e.g., one anna per yard of cloth or two rupees per maund of wheat, etc. The duty is called *ad valorem* when it is imposed according to value, e.g., 10 per cent on motor cars or radio sets, etc.

Customs duties or tariffs may have either revenue or protection as their purpose. To protect cotton industry an export duty on raw cotton may be imposed to cheapen it for the manufacturer or an import duty on cotton manufacturers may be levied. The latter is the usual method. The revenue and protection purposes are in a sense in conflict. A high protective duty by seriously curtailing imports may act adversely to revenue. A low duty may give revenue but may be useless for purposes of protection. A moderately high duty may bring revenue and may also have protective effect.

(4) *Preferential Treatment.* Sometimes discrimination is observed in the rate of duties with regard to different countries. For instance, India gave preferential treatment to certain British goods under the Ottawa Agreement of 1932. India also received preferential treatment in the British market against non-Empire goods. Such

1. B. W. Knight : *Economic Principles in Practice*, p. 344.

(7) *Import Monopolies.* The government may make the importation of goods a State monopoly, as Russia does, and thus reduce imports or discriminate.

These barriers were extensively used during the inter-war period in the pursuit of economic nationalism by many countries of the world especially during the Great Depression.

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14. Conference Number of the Indian Economic Association for the Year 1948.

CHAPTER XL

BALANCE OF PAYMENTS

1. Introduction. In the last two chapters we were mainly concerned with the reasons why nations find it worth while to carry on trade with each other ; further why and under what conditions they prefer to restrict such trade. One of the motives for restriction of imports is to balance payments. If a country for one reason or another cannot pay for the imports by exporting goods (or services) she must reduce her imports, for the simple reason that international trade, ultimately speaking, is nothing else but bartering of goods and services for goods and services. In this chapter we shall study how disequilibrium arises in the balance of payments and in what manner such a situation is met by countries. We must, however distinguish between "balance of payments" and "balance of trade."

2 Balance of Trade and Balance of Payments. Whether international trade is free or restricted, it being a form of barter, it must affect, in the long run, imports and exports of goods and services to the same degree. No country can restrict imports without at the same time restricting exports in the widest sense of the term. Accounts must balance in the long run of countries as of individuals, if they are to survive.

Distinction may be made between the invisible and visible items of imports or exports. When goods including treasure are imported or exported they are recorded at the ports in the trade accounts. They are called visible items of trade. Export and import of services are not thus recorded and are thus called invisible items. Balance of trade refers to the value of imports and exports of commodities including treasure or visible items only. Balance of accounts or balance of payments refers to total debts or credits whether due to visible or invisible items. Debts and credits must balance in the long run. Imports and exports of merchandise and treasure need not balance and they seldom do.

When imports are greater than exports (over a year) the balance of trade is said to be adverse, negative, passive or unfavourable to the country ; when exports are greater it is positive, active, or favourable. A favourable balance of trade, however, need not be to the advantage of a country. These terms come from the Mercantilist School of the 18th Century England, who regarded greater exports than imports as favourable, because such a balance brought more gold into the country. What really matters is not the balance of trade but balance of payments or accounts. A country must balance its accounts in the long run. A persistently adverse balance of payments means that the country is heading towards bankruptcy.

A favourable balance of trade in the light of the above does not indicate that a country enjoys a favourable position in international transactions or that the country is prosperous. In fact the reverse is more likely. Great Britain, before the recent war, had normally an adverse balance of trade, while India had a favourable balance of trade. Great Britain was much more prosperous than India. India's favourable balance merely indicated that India had to make more payments in goods to counterbalance the larger payments received in the form of various kinds of services from Great Britain. A favourable trade balance may merely reflect the debtor position of a country. It has nothing to do with wealth or poverty. What really matters is not the balance of trade but kinds of goods imported and exported. Indian exports have mainly consisted of raw materials and imports of manufactured goods. This indicates her backwardness in economic development irrespective of any balance of trade.

3. Items Entering Balance of Payments. How is the balance of payments of a country constituted? Let us enumerate the various items that enter into it.

(a) The chief item is the international trade in commodities. A comparison of the value of imports and exports gives us the balance of trade as noted above. The table below gives the main groups of articles imported into and exported (excluding re-exports) from India in 1944-45.

<i>Crores of rupees</i>				
	<i>Imports.</i>	<i>Exports.</i>	<i>Balance.</i>	
1. Food, Drinks and Tobacco ...	18.8	49.5	+30.7	
2. Raw Materials ...	117.2	45.3	-71.9	
3. Manufactures ...	62.4	112.8	+50.4	
4. Living Animals ...	2.5	0.3	+0.8	
5. Postal articles and Baggage not specified ...		3.0	...	
Total ...	200.9	211.0	+10.1	

Some recent figures relating to India are given below :—

<i>Crores of Rupees.</i>				
	1942-43	1943-44	1944-45	
Imports ...	110.4	117.7	200.9	
Exports (Foreign) ...	7.0	10.9	18.7	
Exports (Indian) ...	187.9	199.0	227.7	
Total Exports ...	194.9	210.0	211.0	
Balance of Trade ...	+83.5	+92.2	+26.7	

These figures do not include transactions on Government account which were kept a secret due to war. The term balance of trade refers to merchandise. But the visible balance of trade includes also transactions in treasure. Thus in 1938-39 our total exports (including re-exports) were Rs. 163 crores and total imports Rs. 152

crores giving a positive balance of Rs. 17 crores on merchandise account. We also exported Rs. 12 crores on the net in treasure. This made our visible balance of trade come to Rs. 29 crores. Ten years earlier (1929-30) this figure was Rs. 53 crores even after making a deduction of Rs. 26 crores on account of the net imports of treasure. Our favourable balance on merchandise account in that year was as high as Rs. 79 crores. But this was balanced in its turn by *invisible import*.

(b) This brings us to the payments for services, or invisible imports or exports, which is the second important item in the balance of payments. Such services may be of various kinds like 'transport services, shipping freights, passenger fares, harbour and canal dues, postal, telephone and telegraph fees, commercial services (fees and commissions), financial services (broker's fees etc.) and services connected with the tourist traffic.' Care should be taken that none of these services is counted twice. Thus if an imported commodity is re-exported at an enhanced price, the difference even due to services included in 'invisible exports' will be reflected in the price statistics of imports and exports. In such a case it should not be counted separately.

The example of invisible imports may be found in the various payments that India had to make to the United Kingdom on account of leave and further allowances, pensions and gratuities of all kinds of Englishmen engaged in Indian services, British military personnel in India, British shipping and insurance services rendered to Indians, expenditure of Indian tourists and students in Great Britain, etc.

(c) The balance of trade and balance of services is sometimes grouped together and contrasted with what is called the balance of credit. This may consist of interest balance on the one hand and capital balance on the other.

Interest balance will include fixed interest on Government, municipal and private loans, variable profits and dividends, rents, etc.

As regards the capital balance, distinction should be made between long-term and short-term investments. Long-term capital exports include purchase of shares in foreign undertakings, repurchase of home securities, repayment of loans contracted abroad. Short-term capital exports include any increase in the volume of bank balances held abroad, in the holding of foreign bills, etc.

Before the War of 1939-45 India had to pay large sums to Great Britain as interest on capital invested in Indian Railways and canals. The position has been reversed now. India is now the creditor and Great Britain the debtor. Sterling balances approaching Rs. 1,500 crores have accumulated in favour of India in London. Our credit account has thus become positive.

(d) Finally, there is another set of items which is included in the

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balance of payments. Such are Government transactions like salaries of diplomatic representatives, subsidies, reparations, gifts of money such as remittances sent home by emigrants, etc.

4. Different Meanings of the Term Balance of Payments.

We have given above the main items usually included while striking a balance of payment. The term, however, does not always convey the same meaning.

Thus:—

(i) Sometimes it refers to the amounts of foreign currency bought and sold within a given period of time. In this sense the balance of payments is always in equilibrium. This is so because the amount bought is necessarily equal to the amount sold. This concept does not help us much.

(ii) The term may refer to the payments made to and from foreign countries, within a specified period. This is not the same as (i) above. Payments may be made not only by the purchase of foreign money, but by the transfer of foreign money already held. Balance of payments in this sense may be passive for a time, though only as long as the money already held is not exhausted. But it must have been active earlier to enable the country to accumulate the foreign money held.

(iii) The term is also used in a more restricted sense when it refers to the balance of payments on income account. This will include interest balance, balance of trade and of services. If the balance in this sense is passive or unfavourable then either the capital balance is active or there is a transfer of gold or foreign currency. Unfavourable balance in this sense, therefore, indicates the degree of indebtedness or balance of liabilities which must be made by transfer of gold or export of shares, etc.

(iv) A step further from the above is the concept in the sense of the balance of "international indebtedness" which extends beyond the liabilities falling due within a given period. It represents the total volume of claims and liabilities outstanding at a given moment.

(v) The greatest significance of the balance of payments arises in connection with its influence on the rate of exchange, i.e., the value of the domestic currency in terms of the foreign currency or currencies. From this point of view it is not sufficient to measure the amount of liabilities outstanding at a given moment or falling due within a given period of time. It does not help either to record subsequently all the payments actually made during a given period. Here the best method is to apply the supply-and-demand analysis. The value of the home currency in terms of the foreign currency may be regarded as its price. For instance the price of a rupee is 1s. 6d. How is this price determined? Obviously by the forces of demand and supply. When payments have to be made to the foreigner there is a supply of home currency (or demand for foreign currency).

In the opposite case when payments have to be received from a foreigner there is a demand for home currency (a supply of foreign money) in the exchange market. The items included under balance of payments give rise to either supply of or demand for home currency (or foreign currency) as the case may be. "The term balance of payments is then used," says Haberler, "in the sense of the whole demand and supply, situation."¹ We shall use the term in this sense when dealing with foreign exchanges.

5. Equilibrium of Balance of Payments. When the balance of payments of a country is in equilibrium the demand for the domestic currency is equal to its supply. The demand and supply situation is thus neither favourable nor unfavourable. If the balance of payments moves against a country, adjustments must be made by encouraging exports of goods, services or other forms of exports, or by discouraging imports of all kinds. No country can have a permanently unfavourable balance of payments, though it is possible and is quite common for the countries to have a permanently unfavourable balance of trade. Total liabilities and total assets of nations as of individuals must balance in the long run.

This does not mean that the balance of payments of a country should be in equilibrium individually with every other country with which she has trade relations. This is not necessary nor is it the case in the real world. Trade relations are multilateral. India, for instance, may have an active balance of payments with the United States and passive balance with the United Kingdom and/or other countries. Payments may be made in a triangular form. For instance India may send jute to the U.S.A. and be paid by importation of bicycles from the United Kingdom, the United Kingdom in its turn importing raw cotton from the United States. More complicated forms of payments may arise when a large number of countries are involved. But each country in the long run cannot receive more value than she has exported to other countries taken together.

Equilibrium in the balance of payments, therefore, is a sign of the soundness of a country's economy. But disequilibrium may arise either for short or long periods. A continued disequilibrium indicates that the country is heading towards economic and financial bankruptcy. Every country, therefore, must try to maintain its balance of payments in equilibrium. To know how this can be done involves the study of the causes of disequilibrium.

6. Causes of Disequilibrium. How may disequilibrium arise in a country's balance of payments? We have already detailed the various items that enter into the balance of payments. Any cause that leads to a persistently one-sided movement in those items may cause a disequilibrium. For instance, certain causes may lead to a falling off in the export of merchandise, imports remaining unaffected or moving in the opposite direction. Similarly as regards the other items, falling off in exports may be due to all sorts of causes. Take the case of merchandise for illustration. Our experts may

1. Haberler : op. cit., p. 19.

fall because of decreased production due to seasonal factors or other causes. The demand for our goods in the international market may fall off because of a fall in the purchasing power of consumers of such goods or because of a comparatively high cost of production in India which reduces our competitive strength in the international market. Our exports may become dear to foreigners because of an appreciation of our exchange, a rise in the value of the rupee say from 1s 6d. to 1s. 8d. If we persist in artificially keeping the value of the rupee at a higher level than justified by economic forces (which we shall study in the next chapter) unfavourable balance of trade and of payments will tend to persist.

In the same way disequilibrium may arise due to excessive imports of services not balanced by exports, or import of capital, etc. Compulsory exports in the form of reparations or indemnities also cause international disequilibrium and obstruct the harmonious trade relations between the countries.

7. How Disequilibrium May be Corrected. When a serious disequilibrium arises in a country's balance of payments steps must be taken to correct it, if the country's economy is to be kept in a sound condition. Obviously the causes which are responsible for such a state of affairs must be removed.

There are five well known methods of correcting an adverse balance of payments :

(i) Stimulating Exports and/or checking imports. If the exports have fallen off steps should be taken to encourage exports. To encourage exports the level of costs in the country may have to be brought down. This may involve cutting down of wages, and interest rates and other incomes and also contraction of currency to bring prices down.

(ii) Exports are also encouraged by granting bounties to manufacturers. Imports may be discouraged either by total prohibition or by imposition of import duties or by adopting the quota system.

Another method is to depreciate the external value (exchange) of the home currency, thus cheapening domestic goods for the foreigner. This latter course, however, has serious limitations because other countries may start doing likewise and 'competitive depreciation' of exchange may start, as it happened during the depression years in the 'thirties.'

(iii) The third method is to deflate the currency. As currency contracts, price will fall which will stimulate exports and check imports. But the method of deflation, however, is also full of dangers. If prices are forced down while costs which are proverbially rigid (especially as regards wages in countries where Trade Unions are well organized) do not follow suit, the country may face a serious depression and unemployment. Correcting the balance of payments, therefore, once a disequilibrium has arisen, is not an easy matter.

(iv) The fourth method is of devaluation. Its effect is the same as depreciation. When a currency is devalued, (i.e., its metallic content is reduced) its value in terms of foreign currency decreases. The result is that the foreigners are able to buy in our country more goods than before with the same amount of their currency. This would stimulate exports. But when we want to buy foreign goods, our currency having become cheaper, we have to pay more for them. Imports are thus discouraged and in course of time balance of trade turns in our favour and corrects the balance of payments.

(v) Finally, there is the method of exchange control. We know that deflation is dangerous; depreciation has a temporary effect and may provoke others also to depreciate; and devaluation hits the prestige of a country. These methods are, therefore, avoided and instead foreign exchange is controlled by the government. All the exports are ordered to surrender their foreign exchange to the central bank and it is then rationed out among the licensed importers. None else is allowed to import goods. The balance of payments is thus rectified by keeping the imports within limits.

When gold standard was effectively at work in most countries disequilibriums in international payments were automatically corrected to a fair degree. This was before the War of 1914-18. During the inter-war period (1919-1939), gold standard was introduced during the earlier portion of this period in a modified form and broke down during depression for reasons already noted by us in another chapter. Gold standard ceased to be automatic and hence ineffective in this connection.

Recently attempts have been made to evolve a new international machinery for maintaining equilibrium in the balance of international payments and for correcting disequilibrium when it may arise. This new scheme we shall discuss in the next chapter after we have studied the problem of foreign exchanges.

Select References.

1. Haberler—Theory of International Trade.
2. Whale—International Trade.
3. Taussig—Principles of International Trade.
4. Hensler—Control of International Trade.
5. Thomas—Elements of Economics, p. 503 onwards.
6. Brij Narain—Principles of Economics, p. 170 onwards.
(S. Chand & Co.,)
7. Benham—Economics, 1940, pp. 425—435.

CHAPTER XLI

FOREIGN EXCHANGE

1. What is Foreign Exchange ? The term "foreign exchange" may refer to—

(a) the rate of exchange, i. e., the amount of money of a foreign country that a unit of the money of the home country will purchase ;

(b) the foreign exchange operations or transactions i.e., converting one currency into another or the machinery by which foreign payments are made ;

(c) the fund of foreign exchange (currency) at the disposal of a country ; or

(d) the principles that determine the rate of exchange.

Here we shall use the term in the fourth sense.

If there were no international trade there would be no foreign exchange. On the other hand, if there was only one common money for the whole world, there would be no problem of foreign exchanges. As it is, countries by their economic relations create mutual obligations which must be met, and the money of the various countries being different, the problem of converting the money of one country into the money of another arises in international trade.

To take a concrete example : Suppose you import books worth Rs. 100 from England. Indian rupees are no good to the English bookseller. You must make payment in money which has purchasing power in England. The English money is pound (£) sterling. You must, therefore, convert your Rs. 100 into pounds sterling (or titles to pounds sterling). You can also send gold if you can get it and think it worth while to bear the cost of its transport. Similarly a man in England might have purchased wheat from an Indian exporter. He must convert his pounds sterling into rupees (or titles to rupees) or send gold if possible and economical. At any moment, therefore, in every country there are people who want to make payments in foreign countries and there are others who have to receive payments from foreign countries. The former have imported goods or services and the latter have exported goods or services. It is immaterial whether they have imported or exported on their own behalf or on somebody else's behalf. Normally they are middlemen who import or export for others and make profits out of this business. Obviously exporters from India are entitled to receive payments from importers in England, and importers in India have to make payments to exporters in England and similarly in the case of any two countries. Indian importers can buy titles to English money from Indian exporters and make payments to English exporters. Similarly English importers can buy titles to Indian money from English exporters and make payments to Indian exporters. Thus in every country there are buyers of foreign money (or titles to it) and

sellers of foreign money (or titles to it). In other words there is demand for foreign money and supply of foreign money. It is this demand and supply that determines the rate at which foreign money can be purchased (or native money sold) or sold (or native money purchased). These buyers and sellers and their agents are collectively known as the foreign exchange market.

This is, however, a very simplified statement of the theory. In the actual world exporters and importers do not directly deal with each other. The banks (exchange banks or other banks who also deal in exchange) serve as middlemen. Importers buy titles to foreign money from banks and exporters sell titles to foreign money to banks. The banks make a profit by acting as intermediaries between the two.

2 Titles to Foreign Money. We have yet to explain the nature of what we have called 'titles to foreign money'. These may take the form of (i) Bills of Exchange, (ii) Bankers' Drafts, or (iii) Telegraphic Transfers. We have already explained what is a bill of exchange and we have also noted there its advantages in financing foreign trade. An Indian exporter draws a bill of exchange against the English importer of his goods in terms of pounds sterling. This bill he sells to a bank or technically gets it discounted. He is paid the present value of the bill in rupees. An importer of English goods in India buys such a bill by paying rupees and sends to his exporter in England who gets it discounted from a bank or receives payment from the English importer on the maturity of the bill in terms of pounds sterling.

Drafts as we have already seen are orders from one bank to its branch, or another bank with which the former may have account, to pay the bearer on demand, a specified sum of money. In short a draft is a cheque drawn by one bank on another in favour of a third person. You can send money to England by purchasing a draft payable in English money. This draft is sent by post to the person whom the payment is to be made and the latter realises the money by presenting it to the bank on whom the draft is drawn.

A telegraphic transfer is an order by telegram to a bank to pay a specified sum of money to the specified person. It may be called a draft sent by wire. By this method payments are made immediately. Telegraphic Transfer (T.T.) rates are, therefore, more unfavourable to the buyer than rates charged for ordinary drafts.

3. Rates of Exchange. Determination of the rate of exchange requires more explanation. We have seen that it is the supply of and demand for foreign money that determines the rate of exchange; just as the market price of commodities is determined by the forces of supply and demand. We have also seen how the demand for and supply of foreign money (or conversely supply of and demand for home money) arises. When the supply is equal to demand the exchange is said to be at par. If supply of foreign money is more

than demand the value of foreign money falls below (or of home money rises above) the par. And conversely if the demand for foreign money is more than supply the value of foreign money rises above (or of home money falls below) the par.

Up to what limits the exchange can rise above or fall below the par? These limits are determined differently under different conditions. The par of exchange also has different meanings under different conditions.

4. Rates of Exchange Under Gold Standard. When the two countries concerned are on gold standard as already explained their currency units are either gold coins or are convertible into gold at fixed rates. Moreover gold freely moves between the countries. The par of exchange between such countries is called the "*mint par of exchange*." This is arrived at by equating the amount of gold contained in the currency units (or given in exchange for them by currency authorities respectively) of the two countries. There can be no mint par between a gold standard and a silver standard country.

For instance, before the last war England and France were both on gold standard. Their mint par of exchange could be calculated as follows:—

One English Sovereign	= 7.98805 grammes of gold 11/12 fine.
	= 7.32238 grammes of pure gold.
One French Napoleon 20 Francs	= 6.45161 grammes of gold 9/10 fine.
	= 5.80645 grammes of pure gold.
	7.32238 × 20
Therefore one sovereign	= ————— francs.
	5.80645
	= 25.2215 francs.

Thus the mint par between London and Paris was 25.2215 francs to the £. If the exchange is at par under these conditions a French importer would get one £ in London by paying 25.2215 francs in Paris to meet his obligations. An English importer would get 25.2215 francs in Paris by paying one £ in London.

5. Specie Points. Now suppose the French people have to make more payments to the English people than the latter have to make to the former. The demand for English money in France will be greater than its supply. The value of the £ will rise in terms of the franc. The French importer will have to pay more than 25.2215 francs in order to get one £ in London. But how much more will he be willing to pay? We have already said that an importer will send gold if he can get it and thinks it cheaper to send it. Gold standard countries always provide gold in exchange for their money and allow it to leave the country. But gold involves cost of transport (shipping, insurance, interest charges, etc.) when it has to be sent. The importer in France will, therefore, only send gold if the exchange is higher than the par to the extent of more than the cost of transporting gold from Paris to London. Suppose cost of transporting 25.2215 franc worth of gold from Paris to

London is 3 francs. Then it will be worth while sending gold if the exchange rises above 25.5215 francs to the £. If the exchange actually rises above this point gold will begin to move from France to England. This point is thus called gold export point from the point of view of France and gold import point from that of England. This point is obtained by *adding* the cost of transport to the mint par of exchange. It is also called the upper gold point or the upper specie point.

In the same way there is a lower specie point, or gold import point for France and gold export point for England. This is obtained by *deducting* the cost of transport from the mint par. In the above example it will be 24.9215 francs of the £. If the exchange falls below this point English importers will send gold rather than purchase titles to francs.

Thus if gold is available and is allowed to move freely between two countries (gold standard) the rate of exchange will move between the two limits set by the upper and lower gold points, also called "specie points." If gold is not available then the rate of exchange will pass beyond the specie point. These are the two limits within which the fluctuations will be determined by the supply of and demand for foreign money, *i.e.*, bills, drafts, T.T.s, etc.

6. Exchange Between Gold and Silver Standards. The above is a case where both the countries concerned are on gold standard. If one is on gold-standard and the other on silver standard, or on an inconvertible paper, the par of exchange will be determined by the price of gold in terms of silver or paper money in the country on silver or paper standard, respectively.

7. Exchange Between Inconvertible Paper Currencies—Purchasing Power Parity. But the most difficult case is that of countries both on inconvertible paper. Suppose England and France were both on paper currency inconvertible into metal. Then how many francs would have to be paid to get a £? Obviously as many as would have the same purchasing power in France as a £ has in England. If a £ in England purchases a collection of x commodities, then a £ will purchase as many francs in France as will buy the same collection of x commodities in France, allowing for the cost of transporting x commodities, from one country to the other.

Let us suppose in England a £ purchases x commodities.

In France x commodities cost 25 francs. Then the rate of exchange will tend to be—

$$£ = 25 \text{ francs.}$$

Now suppose the price levels in the two countries remain the same but somehow exchange moves to

£=30 francs.

This means that the purchasing power of the £ in France is more, i.e., 30 francs. It will pay people to convert £s into francs at this rate, purchase x commodities in France for 25 francs and sell them in England for one £ again, making a profit of 5 francs per pound worth of transaction. This will create a large demand for francs in England while supply of francs in England will be less because very few people would export commodities from England to France. The value of the franc in terms of the £ will move up until it will reach £=25 francs. At that point imports from France will not give any abnormal profits. This £=25 francs is called the Purchasing Power Parity between the two countries. "While the value of the unit of one currency in terms of another currency is determined at any particular time, by the market conditions of demand and supply, in the long run that value is determined by the relative values of the two currencies as indicated by their relative purchasing power over goods and services. In other words, the rate of exchange tends to rest at that point which expresses equality between the respective purchasing powers of the two currencies. This point is called the Purchasing Power Parity." (S. E. Thomas).

In the above example if prices in France got doubled the value of the franc will be exactly halved. The new parity will be £=50 francs. This is because now 50 francs will buy x commodities in France which 25 francs did before. We suppose that prices in England remain as before. But if prices in both countries get doubled there will be no change in the parity.

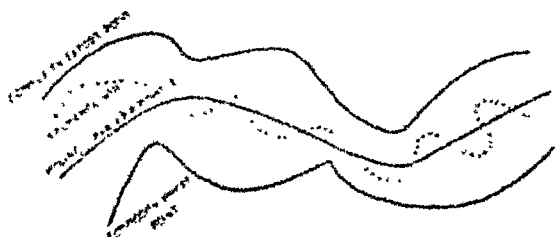
Thus :—

2£=50 francs.

£= 25 francs.

In actual practice, however, the parity will be modified by the cost of transporting goods (including duties, etc.) from one country to another.

Thus between countries on inconvertible paper the place of the mint par is taken by the purchasing power parity. The difference is that the former is a fixed par while the latter moves with movements of the price levels in the two countries concerned. Day-to-day fluctuations around this par will take place as before due to changes in the supply of and demand for the currency in question. The limits to these fluctuations will be set by the cost of transport-



ing goods from one country to another. Hence these limits will not be as definite as were the specie points. The above diagram illustrates these points.

8. Criticism of the Purchasing Power Parity Theory. This theory was popularised after World War I by Gustav Cassel, the Swedish Economist. "The rate of exchange between two currencies," wrote Cassel, "must stand essentially on the quotient of the internal purchasing powers of these currencies." "This is easily seen if we reflect on the fact that the price paid in a foreign currency is ultimately a price which must stand in a certain relation to the prices of commodities on the home market."

It should be noted that purchasing power parity compares the general price levels in the two countries and not merely the price levels of goods actually entering international trade. The prices of the latter kind of goods, of course, are the same in all countries allowing for the cost of transportation, tariffs, etc. It is quite easy to verify the theory if we only compare prices of internationally traded goods. But when we try to compare the index numbers of the prices of the whole mass of goods marketed in the countries concerned the rate of exchange will not always conform to the points thus determined. This is so because prices of domestic goods may not move in the same direction, at least not in the short period, as of those entering into international trade. In the long run, of course, the rate of exchange and price levels will tend to move in the same direction. The theory, therefore, only holds good in the long period.

Even in the long period the theory will be valid only if the essential conditions of international trade remain unchanged. But such conditions seldom remain unchanged. For instance, the barter terms of trade are constantly in the process of change between countries due to changes in the demand for foreign goods or changes in the conditions of supply of domestic goods. Further, changes may occur in the volume of foreign loans, cost of transport or in any other item of invisible balance of trade. Changes in barter terms thus brought about may disturb the relationship between the price levels and parities based on such price levels may not correspond to the rate of exchange.

Finally, many items of balance of payments like insurance and banking transactions, capital movements are very little affected by changes in general price levels. But these items do influence exchange rates by acting upon the supply of and demand for foreign currencies. The Purchasing Power Parity Theory ignores these influences altogether.

In conclusion we may say that the Purchasing Power Parity Theory attempts to explain the ultimate rather than the immediate forces determining the rate of exchange. In spite of its shortcomings the Purchasing Power Parity Theory is now recognised as the most important explanation of the rates of exchange in the long run. The theory is applicable to all currencies. It is superior to

the old theory according to which the rate of exchange was determined by balance of indebtedness. This theory goes even to the root of the balance of indebtedness. It explains how balance of trade or indebtedness itself is determined. This theory lays proper emphasis on the importance of the price levels on the determination of rates of exchange. The actual rate at any particular moment may diverge from the equilibrium rate as indicated by the purchasing power parity due to the various factors affecting the terms of trade or the balance of payments for the time being. What are these factors ?

9. Fluctuations of the Rate of Exchange. Whether the long-term parity is the mint par as under gold standard or purchasing power parity as under inconvertible paper during the short period there are various causes that may lead to fluctuations in the rate of exchange above or below this equilibrium level.

These influences can be grouped under two heads.

- (i) Those affecting demand or supply of foreign currency, and
- (ii) those affecting currency conditions.

(i) As regards the first, the demand and supply of foreign currency arises from three sources :—

- (a) Trade conditions.
- (b) Stock Exchange influences.
- (c) Banking influences.

(a) *Trade conditions.* These affect exports and imports and hence the supply of and demand for foreign currency respectively. When our exports are greater than imports exchange will tend to move in our favour and in the opposite case it will tend to move against us. Exports and imports here include not only visible but also invisible items.

(b) *Stock Exchange influences.* These include payments of loans, interests and repayment of loans, purchase and sale of foreign securities, etc. When a loan is given by the home country to the foreign country the demand for foreign currency increases and the value of home currency tends to fall. The same is the case when home investors purchase foreign securities or foreign investors sell home securities. The exchange moves in favour of a country when its loans are being re-paid or when foreigners buy her securities, because such transactions create demand for the home currency.

(c) *Banking influences.* Under this category comes the purchase or sale of bankers' drafts, travellers' letters of credit, arbitrage operations (i.e., buying and selling of foreign currencies to make profit out of differences in the rates in different centres), etc. The sale of a draft on a foreign centre creates demand for foreign currency and raises its value or lowers the value of home currency. The bank rate also influences exchange rates. A high bank rate attracts funds from foreign centres and thus raises the demand for domestic money

and hence its value. In the opposite case its value falls, because funds move out of the country, thus creating demand for foreign money.

(ii) *Currency conditions.* Actual or expected changes in the volume of currency also affect its exchange rate. If there is an over issue of currency or an over-issue is expected, people will not be anxious to invest their funds in such a country. In fact funds will tend to move out. This is called a "flight from the currency." If people expect a currency to appreciate they will tend to purchase such a currency for speculative gains. In the former case the exchange rate will tend to be unfavourable and in the latter to be favourable.

9. (a) Limits to Exchange of Fluctuations. But these fluctuations take place within certain limits. Under gold standard we have already seen that such limits are indicated by the specie points or gold points.

A country is said to have a *favourable exchange rate* if the rate is nearer the gold import point and *unfavourable* if it is nearer the gold export point. The rate is also said to be favourable when the value of home currency becomes greater in terms of foreign currency or when it is likely to lead to importation of gold on account of excess of exports over imports. If the value of home currency falls or gold tends to leave the country, the rate is said to be unfavourable. It should be remembered, however, that the terms 'favourable' and 'unfavourable' are only technical terms coming down from mercantilist era. What is called 'favourable' may not be really so. For example as compared with 1s. 4d., the rate of 1s. 6d. was called more favourable to India because at this rate the home currency buys more. But this rate was certainly detrimental to the country's interests as it injured both agricultural and industrial interests.

The exchange does not rise above the gold import point (supposing it is quoted in foreign currency) because it becomes cheaper to the foreign importer to send gold rather than to purchase our currency. Conversely, the rate of exchange does not fall below the gold export point because it becomes cheaper for the home importers to make payments by sending gold out of the country rather than by purchasing foreign money.

When both the countries are on inconvertible paper the place of the mint par is taken by the purchasing power parity. As already noted the purchasing power parity is not fixed like the mint par but is a moving par. Hence there are no definite limits to the movements of exchange. The fluctuations will be in accordance with changes in the demand and supply of currency and in the currency conditions as already noted.

10. How Disequilibrium is Corrected Under Gold Standard. While studying the gold standard we observed as one of its advantages that under it any disturbance in the equilibrium of balance of payments tends to correct itself. Let us see how this

happens. A perfectly ideal gold standard can only be theoretically imagined but the British system before 1914 may be taken as nearest to the ideal.

Suppose Great Britain of those days imported more than she exported and that this adverse balance was not covered by invisible exports. This would increase the demand for foreign currency (say that of France which was also on gold standard). Thus depreciating the £ in terms of the franc. This depreciation itself would make British goods cheaper for French men and French goods dearer to the British. Exports thus would be encouraged, imports discouraged and the balance of trade would tend to move in favour of Britain thus correcting the original disequilibrium. This would happen even if the exchange moved slightly against Britain.

But suppose the adverse balance was very serious and exchange moved beyond the gold export point from England. Gold would then begin to flow out of England into France. There would be contraction of credit in England (through the action of the central bank to preserve its reserves) and a corresponding expansion of credit in France. Prices and costs would fall in England and rise in France. England would become an attractive market to buy from. The reverse would happen to France. English exports would be encouraged and imports discouraged. Thus the original cause of disequilibrium would be corrected.

For the automatic working of such a system, as we noted in an earlier chapter, certain conditions must be satisfied, i.e., gold should be allowed to move freely and to have effect on the prices and costs in the two countries, raising them in the country receiving it and lowering them in the one losing it. This implies the elastic character of the economic system and the willingness of the central banks to play the game of the gold standard.

These conditions existed to a fair extent before 1914 and did not exist after World War I. Thus it was that the gold standard ceased to be effective in automatically correcting international disequilibrium.

11. Correction of Disequilibrium Under Inconvertible Paper. If the goods are allowed to move freely between countries similar automatic correction can be imagined also under the inconvertible paper system. Instead of gold movements there will be movements of goods with their effect on the relative price levels in the two countries.

In actual practice, however, relative price changes in countries are much more difficult to realise when the connecting link is a commodity or commodities than when it is gold. For one thing gold is much more universally accepted than commodities the demand for which depends upon a host of factors. Thus the actual rate of exchange may remain divergent from the purchasing power parity and this disequilibrium may not be corrected by changes in the relative price levels. In such a case the usual method of bringing about

equilibrium is to let the exchange move to adjust itself to the price level.

Another difference between exchange under gold standard and that under paper standard is that the present value of paper currency is to a large extent influenced by opinions about its probable future value. If it is generally believed that the currency in question is likely to depreciate people will try to get rid of it by converting it into a currency with better prospects. Thus such a currency will depreciate even though nothing has happened to the relative price levels in the countries concerned. A disequilibrium will thus arise through this speculative influence.

Another factor is the influence of the intensities of reciprocal demands of one country for the goods of another. Even if the relative price levels remain undisturbed, if for any reason the demand of a country A for the goods of a country B becomes relatively more intense the rate of exchange will move against country A and in favour of country B to a greater extent than necessitated by differences in price levels. If the two countries are on gold standard this condition would have resulted in A losing gold to B until the changes in the price levels brought about equilibrium at the mint par of exchange.

Roughly we may say that between countries on gold standard the equilibrium tends to be established through movements of gold and of relative prices and these on inconvertible paper through movements in exchange rates.

12. Exchange Stability versus Price Stability. Thus under gold standard exchanges are relatively more stable and adjustments are made through gold movements with consequent effect on relative price levels. Under inconvertible paper adjustments are made more easily by movements in exchange. But even under inconvertible paper exchange may be artificially controlled and kept stable. Then adjustment will have to be made by a painful movement of relative prices and costs in the countries concerned.

The question arises which policy should be the aim of a country, exchange stability or price stability. No unconditional answer can be given to this question. It will depend upon the economic conditions within the country concerned and on the volume of its foreign trade.

If the country is a large one and foreign trade plays only a minor part in its economy and its price and cost structure is not elastic it will be to its advantage to preserve stability of its price level and make necessary adjustments by moving the exchange rate. On the other hand a small country with a large amount of foreign trade and elastic price and cost structure, will do well to keep its exchange stable and let adjustments be made through movements of internal prices and costs. For instance, a country like India should aim at stable prices and free exchange while for Great Britain stable exchange is the more important objective.

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13. Exchange Control. So far we assumed that the exchange is left free to achieve its level through the working of the forces of supply and demand. Since World War I, however, this assumption has been rarely true. The State has exercised a growing control over the movements of exchange for various reasons. This control has been exercised either by regulating international movements of goods through various devices or by the purchase and sale of foreign currency at specified rates in order to maintain a particular range of exchange fluctuations. The various forms that exchange control has taken are briefly discussed below :—

(i) *Exchange "Pegging"*. This device is usually adopted during war years in order to minimise exchange fluctuations. The internal value of a currency may depreciate due to inflation but the Government may seek to keep its external value at a higher level than that warranted by the purchasing power parity in order to facilitate international transactions. This method was adopted by England during World War I and again in the recent war. Between 1916 and 1919 the sterling was kept artificially pegged at 4.765 dollars—a value which was higher than the real value of the sterling. This was done by raising loans in America and through these funds purchasing exchange on London at the above rate.

(ii) *Exchange Equilisation Account*. After the suspension of the gold standard in 1931 by England there again arose the necessity of preventing violent exchange fluctuations. For this purpose the device of the Exchange Equilisation Account (already explained in a previous chapter) was utilized. Foreign currency was purchased or sold as the necessity arose with the help of this fund and thus exchange was kept within a narrow range in the face of uncertain movements of short-term funds into and out of England. The Fund is not used to prevent long-term adjustments in the value of the currency concerned. Its main purposes are (i) to 'iron out' short-term fluctuations in the rates of exchange and (ii) to safeguard against the disturbing influences arising out of the movements of short-term funds and of speculative activities. Continually fluctuating exchange rates seriously hamper trade. The fund is, therefore, meant to facilitate the smooth course of foreign trade.

By similar devices the dollar-sterling rate was maintained at £=3.04 dollars during the war recently ended.

(iii) *Exchange Control Proper*. Strictly speaking the term exchange control is applied to several devices most of which were first introduced in Germany during the Nazi regime. Later other countries also adopted some of them.

Some of these devices we have already considered while discussing restrictions on international trade. Here we shall look at them again from the point of view of foreign exchange rather than of foreign trade. Such devices are (a) Clearing Agreements, (b) Standstill Agreements, (c) Transfer Moratoria and (d) Blocked Accounts.

Under a clearing agreement between two countries importers in both pay into an account at their respective central banks the

purchase price of all goods imported. This money is then used to pay exporters. The rate between the currencies is usually fixed by the terms of the agreement. The object is to regulate imports according to the wishes of the government, to ensure equilibrium in the balance of payments and to prevent uncertainties of fluctuating exchanges. The system tends to encourage bilateral at the expense of unilateral trade and thus has a restrictive effect on international trade. On the other hand it discourages dumping and currency depreciation. On the whole the system stands condemned except under special circumstances of war or as a temporary measure to tide over a period of disequilibrium in a country's balance of payments until the basic causes of such a disequilibrium can be removed.

A standstill agreement is a device to prevent the movement of capital through a moratorium on outstanding short-term foreign debts of a country to give her time to put her house in order. Either the short-term debt is converted into long-term debt or provision is made for its gradual repayment. This device was used in Germany after the crisis of 1931.

Transfer moratoria is another device of the same kind. Under this system importers or others pay their foreign debts in their domestic currency to a specified authority. When the moratorium is concluded these funds are remitted abroad. A foreign creditor is sometimes allowed to use his funds in the country imposing the moratorium in a way specified by the government.

Blocked accounts spring from the previously considered two devices of standstill agreement and transfer moratoria. When foreign debts paid in domestic currency to the central bank cannot be remitted abroad without the permission of the government, blocked accounts are said to arise. Since idle funds in the country lead to contraction of credit, the foreign creditors are not altogether prevented from using them. But they have to be used according to the manner permitted by the government. Usually they are allowed to be sold in the open market. In most cases they are sold at a heavy discount.

14. Forward Exchange. The risks of fluctuating exchanges, especially under the inconvertible paper standard, can be avoided through the device known as 'Forward Exchange.' Under it the person who has to make or recover payment in foreign money at some future date enters into a contract with a bank settling the rate of exchange now. Suppose an Indian importer has to pay an English exporter £500 after a period of three months. He cannot be certain how many rupees he will have to pay when the time comes due to the uncertainties of exchange. Without exactly knowing the cost he cannot fix the price of the imported commodity. He can get out of this difficulty by buying forward sterling at a rate agreed now. This relieves him of the risk of exchange fluctuations. In a similar way an Indian exporter who has to receive sterling in

the future can sell it now at an agreed rate to the bank and be sure of the actual rupees that he will get.

The rates of forward exchange are quoted in terms of the current rate or the "spot" rate as it is called. The forward rate is at a 'premium' if less of foreign money is given for a unit of domestic money. It is at a 'discount' if more is given for a unit of domestic money.

Under what circumstances forward rate may be at a discount or at a premium respectively? In other words what are the factors that banks take into account when quoting forward rates? Generally three factors are taken into account.

(i) *The relative rates of interest at home and abroad.* If the rate of interest at the foreign centre is higher than at home it pays the bank to transfer funds to the foreign centre. Thus it can afford to sell forward exchange at cheaper rates. The forward exchange will be quoted at a discount. If the domestic rate of interest is higher there is no inducement to transferring funds abroad. The forward exchange will be quoted at a premium.

(ii) *Marrying a Contract.* Instead of transferring funds the bank may offset one transaction with an opposite one. Some merchants want foreign currency in the future, others are in a position to sell foreign currency in the future. The bank comes in as an intermediary by buying from the one and selling to the other with a margin of profit for itself. This is called marrying a contract. If the bank therefore has already bought forward exchange it will sell it at favourable rates to those who want to purchase it from the bank. Forward rates will thus be quoted at a discount since the bank has already covered the risk.

(iii) *Currency conditions.* If the foreign money is expected to depreciate, the bank will be unwilling to buy it forward, and thus forward rates will be quoted at a premium.

It is easy to understand in the light of the above how forward exchange transactions or dealings in futures as they are called contribute to the reduction of exchange fluctuations. These dealings are carried on not only for genuine trade purposes but also for speculative purposes.

15. Arbitrage Operations. While forward exchanges reduce exchange fluctuations over time, arbitrage operations reduce differences in exchange rates over space. An example will make this point clear. Suppose in the Bombay exchange market the rupee-sterling exchange is quoted at 18d to the rupee and in London for some reason the rate rises to 19d per rupee. Obviously there is an opportunity for making profits out of this difference. You can wire your bank in London to buy sterling at the rate of 19d per rupee which you sell through your bank in India at the rate of 18d per rupee making 1d profit on every rupee. Other people no doubt will also do the same. The demand for sterling in London will rise and the

rate will tend to move towards 18d per rupee. On the other hand the supply of sterling in India will increase and its value in terms of rupees will tend to fall. The exchange rate will move towards 19d. This will go on until the rate in India and in London is practically the same. Of course such a high difference that we have assumed is impossible because arbitrage operations keep the differences at the very minimum.

16. The International Monetary Fund. A more recent attempt to prevent exchange fluctuations is made on an international scale through the establishment of an International Monetary Fund. The main features of the Fund are given below :—

The scheme envisages the establishment of an International Monetary Fund (I. M. F.) which will be constituted by subscriptions from members agreeing to participate in the scheme. This subscription is to be paid according to the quotas allowed to members partly in the form of gold and partly in domestic currency. The resources of the I. M. F. will thus be partly gold and partly currencies of the member countries, the latter being kept in the central banks of the countries concerned.

The purpose of the Fund is to promote exchange stability, to avoid competitive exchange depreciation and to facilitate the expansion of international trade through the conversion of national currencies into one another according to needs. All exchange restrictions and controls, discriminatory currency arrangements and multiple currency practices which are not approved by the Fund will have to be finally eliminated. Some restrictions, however, are allowed during the transitional period.

The chief function of the Fund will be to purchase and sell currencies of member countries for one another. The debtor countries will get accommodation from the Fund to the extent of 75% of their quota plus an addition of 25% each year subject to a maximum of 200% of their quota. These conditions may be relaxed at the discretion of the Fund. Thus a debtor country will be saved from gold exports and consequent deflation (as happened under gold standard) through the help of the Fund.

The creditor countries whose export surplus exceeds 75% of their quota will have their currencies declared scarce. Such currencies will be rationed among countries needing them. The I. M. F., however, can increase the supply of scarce currencies by borrowing or purchase of gold. If even then these currencies are not enough, debtor countries must restrict their imports from creditor countries and thus achieve equilibrium in their balance of payments.

As regards the rates of exchange member countries will be required to fix parities of their currencies with gold. But these parities need not be fixed for all times. An all round uniform change in them can be brought about by the consent of the member countries contributing individually more than 10% of the aggregate quota.

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Apart from this the member countries can alter exchange value of their currencies by 10%. Another 10% change can be brought about by the consent of the Fund. Changes beyond this can be brought about, with the consent of the Fund, only to correct fundamental disequilibria.

The Fund is not to interfere in the internal economy of member countries in order to restore equilibrium in their balance of payments.

The members can withdraw from the Fund by a simple notice in writing.

The Fund is to be managed by an Executive Board.

These are then the main features of the scheme as it was evolved at a conference held at Brettonwoods (U. S. A.) in the summer of 1944. The scheme gives great freedom of action to member countries and does not interfere with their internal economies. In fact it is a system analogous to exchange stabilization accounts evolved by individual countries during the depression years. The same principles have been carried to the international plane. It seeks to achieve the purpose of international gold standard without its shortcomings.

17. Comparison With International Gold Standard. The Brettonwoods Scheme, as the above plan is popularly known, resembles gold standard in certain respects.

Thus :—

(i) Under gold standard every country balances its external accounts with the rest of the world as a whole and not with countries individually.

This is called multilateralism as against bilateralism that became quite popular during the depression of the 'thirties. Export surplus to one country under multilateralism can be used for paying import surplus from another. In the same way under the I. M. F. scheme currencies will be convertible at parities, fixed at any particular moment, though subject to change under appropriate conditions. Thus multilateral transactions will be encouraged.

(ii) Under gold standard a country with a net deficit on the balance of payments meets it by export of gold or drafts, etc. The I. M. F. quota would perform this function under the new scheme.

(iii) Under gold standard there were no restraints such as quotas and direct exchange restrictions which are inconsistent with the principle that trade should be governed by comparative costs. These restrictions directed trade into channels not warranted by this principle. Under the I. M. F. also such restrictions will be removed after the transitional period is over and multilateral trade will be restored on the basis of freely convertible currencies and reasonably stable exchanges.

All these results will be secured under the Brettonwoods Scheme without the disadvantages of gold standard. We have already referred

to some defects of the gold standard in another connection. We may give here the two most important defects of that system which the new scheme will avoid.

(i) Under gold standard gold reserves in a country were affected in precisely the same way by an import surplus on current account (i.e., unfavourable balance of trade) and by the withdrawal of capital. Gold moved out and contracted credit. This defect was largely overcome by the system of exchange equilization account which prevented the inflow or outflow of short-term capital from affecting the basis of domestic credit. The new scheme enables a country to meet her adverse balance by the help of the I. M. F. without unfavourable effects on its credit structure.

(ii) The second and more important defect of the gold standard was that exchange stability was made the first object of policy and it was maintained by deflation of credit in the country losing gold. In theory the country receiving gold was expected to expand credit though this part of the rule of the game was not always observed. This method of maintaining equilibrium in the balance of payments and hence exchange stability worked smoothly only so long as wages (and other costs) were flexible so that deflation of credit lowered prices of exports and restored the original causes of disequilibrium. But since costs became more and more rigid, especially due to trade union pressure for maintaining wages, deflation of credit meant paralysis of economic activity and unemployment in the country with all its consequences.

The new scheme seeks to escape these rigidities of the gold standard. As we have seen though exchange rates are fixed in terms of gold by the member countries, provision is made for change in these rates by members in the case of a fundamental disequilibrium arising. The changes, however, are to be made by the permission of the Fund, but such permission will not be withheld in genuine cases.

Thus the new scheme combines the advantages of gold standard with those of free exchanges. Gold still remains the ultimate standard of value but the rigidities of the gold standard have been avoided. The working of the new scheme, however, requires a high degree of international co-operation. Russia has so far refused to join it. And this is not a good omen.

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CHAPTER XLII

TRADE CYCLE AND CRISIS

1. What is a Trade Cycle. The world has registered a remarkable economic progress especially during the last 150 years. But it would be wrong to think that this economic progress has been one steady upward swing and a continuous movement forward. On the other hand, every business man knows that every ten or twelve years the productive or business machinery receives a rude shock which throws it out of gear for a number of years. The world is familiar with the curious phenomenon, *viz.*, that just as there may be ups and downs in a person's luck, similarly there are upward swings and downward swings in business and that periods of business prosperity alternate with periods of adversity. Every boom is followed by a depression or a slump. This is a trade cycle. The trade cycle simply means the whole course of trade or business activity which passes through all phases of prosperity and adversity.

A crisis, on the other hand, means a period of stress or difficulty when business men find it difficult to meet their commitments. In the words of Adolph Wagner, 'Crises imply the overwhelming and simultaneous occurrences of inability on the part of independent entrepreneurs to pay their debts.' Or in J. S. Mills words, "There is said to be a commercial crisis when a great number of merchants have or apprehend they have a difficulty in meeting their engagements. It is a commercial crisis when only merchants are involved in a difficulty. But when it is accentuated and leads to bank failures then it is called financial crisis.

Let us briefly trace the course of trade cycle. We may start our analysis at a point when business is at the lowest ebb and depression is prevailing all around. We are all familiar with such conditions as prevailed in the early 'thirties throughout the world. The last depression, that the world witnessed, and signal for which was given by the crash in the Wall Street in 1929, was of unprecedented duration and severity and produced the most ruinous effects. Rock-bottom prices prevailed, especially those of primary produce, *i.e.*, agricultural products. Unemployment was rife. Most of the factories were working below capacity and some had closed altogether till better days returned. Constructional and allied industries had no orders to execute. Factors of production were in a state of enforced idleness. Retrenchment was the slogan in all government departments. The market price of an M.A. was Rs. 25 per month. The rate of interest had decreased to a vanishing point and the lucky ones who were employed got distressingly low wages. The purchasing power of money was high but the purchasing power of man was low. The general purchasing power of the community being very low, the productive activity both in the production of consumers'

goods and producers' goods, especially the latter, was at a very low level.

The critical convulsion or crisis being over the world seemed to have settled at this level of employment and standard of living. The inefficient entrepreneurs were weeded out. The business had effected a new equilibrium at a low level of prices, costs and profits. This is how the world adjusts itself to a depression and, the worst being over, the things somehow get going although the horizon is gloomy. This new adjustment or equilibrium may last for a number of years.

But the things are not going to continue to be in a depressed state for ever. After the depression has lasted for some time, the rays of hope appear on the business horizon. Pessimism gives place to optimism. Business men know that better days will come and they just begin to think some time that it is time for recovery to start. The depression contains in itself the germs of recovery. Wages are low even for efficient workers, sufficient number of whom is now available. Money is cheap and so are the other materials and the factors of production. Prices may be low but the costs too are low. The costs have fallen so low during depression that they have overtaken the prices and a margin of profits reappears. Several producers have disappeared and the supply has contracted and no further contraction may be expected. So the prices would not go down further. Such calculations induce an entrepreneur, who may have sufficient financial backing, to take the risk. In order to steal a march over his rivals, perhaps, he orders repairs, renewals and replacements and perhaps a new plant so that he may not be found napping when the market revives. His example is followed by others. Constructional and allied industries receive orders and re-employ labour who spend their newly-acquired purchasing power on consumers' goods. This stimulates further investment and production in several other industries. Lo! the business has turned the corner. The long dark tunnel is nearly passed and the bright end is just at hand.

The spell of depression may have been broken by the government starting the construction or extension of some public work like a railway, road or a canal or some other constructional programme. As a matter of fact at a time of depression the people expect the government to come to their relief by launching public works programme. The amount paid to the contractors, labour and the firms for the necessary materials gradually infiltrate into the community. The purchasing power is augmented. This helps in lifting the depression a bit. These are some of the factors which pull business out of the mire of depression.

Recovery once started gathers momentum. The slender stream of recovery when it has started flowing is strengthened by numerous tributaries on its way. The revival of investment in one industry leads to revival in another. The wages paid to workers in one industry create demand for goods produced by another. With the

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general revival of demand prices show an upward trend. The business receipts show a welcome increase. It is well known that costs usually lag behind the prices. The business man's income takes a forward jump while wages, interest, and other costs still rule at a low level. They are of contractual nature and are not so sensitive to market fluctuations. Profit margins are thus widened. Optimism grows and spreads far and wide. The business man feels that his time has come and he must make hay while the sun shines. New entrepreneurs enter the field. Even laymen are prone to take a hand in business. The banks know that profits are being made and they do not mind extending advances. Credit expands. Business men borrow and go deeper and deeper into business so long as the expected rate of profits exceeds the prevailing rate of interest. Exceptional business prosperity turns the head and their business men indulge in over-trading. The business takes a speculative turn. Everybody is feverishly busy in making money. New schemes are launched and far-reaching commitments undertaken as if this hay day of business prosperity is going to have no end. This phase of the trade cycle is known as boom and it may, like the depression, last for a number of years.

But just as depression created the conditions for recovery, similarly the boom conditions generate their own checks. All idle factors have been employed and further demand must raise their price but the quality available now is inferior. Less efficient workers have to be taken on higher wages. Rate of interest rises and so also most of the necessary materials. As prices have been rising the factors strove for and obtained increased remuneration. The rise in price slows down, it may be that as the industries have re-equipped themselves the flow of further orders for producers' goods has ceased. The costs have after all started the upward swing. They overtake prices ultimately and the profit margins are first narrowed and then begin to disappear. Such symptoms unmistakably point to the fact that the momentum of recovery has spent itself and the boom conditions are almost at an end. The bankers feel uneasy over their advances. They are reluctant to grant further accommodation and throw sinister hints that the loans may be recalled. The Government contracts finish. The outlook is no longer optimistic.

Then starts the downward course. Fearing that the era of profits has come to a close, the business men stop ordering further equipment and materials and they are anxious to clear their present commitments. The prudent business man wants to get out altogether and cuts down his establishment ruthlessly. The Governments apply the axe mercilessly. The bankers insist on repayment. The 'bottlenecks' appear; stocks accumulate. Desire for liquidity increases all round. This accentuates the depression. Just as the recovery is self-reinforcing the forces of depression are also self-accumulating. Every body is shifting for himself. A scramble of liquidity ensues. The business men forget that they sink or swim together. Many business men find that they had exceeded the limits of prudence and

entered into commitments they could not honour. Some of them are forced into bankruptcy. The failure of one firm creates difficulties for those with whom they have business connections. Gloom spreads. There is a general distress, for most people cannot meet their obligations. The conditions become acute. This phase of the trade cycle is known as the crisis—a point of critical convulsions. The horizon is the gloomiest at this time.

The crisis is the period of utmost suffering for the business men. But they recover in course of time from the stunning blow. Their commitments are liquidated somehow and business enters into the stage what has already been described as depression or slump, or a state of stagnation. Lord Overstone describes the course of a trade cycle thus: "state of quiescence—next, improvement—growing confidence—prosperity—excitement—overtrading—convulsion—pressure—distress—ending again in quiescence."¹

2. Characteristics of a Trade Cycle. A study of trade cycles has exhibited two important characteristics. (1) Its cyclical nature, i.e., periodicity. (2) Its general nature or synchronism.

It has been found that trade cycles occur periodically at fairly regular intervals. The interval is not a precise one but the degree of regularity is sufficient to convince us of the periodicity of the trade cycle. Attempts have been made to compute the time taken by the upward swing, the boom period, the downward swing, the crisis and the depression. But there is no unanimity as to the time exactly taken by each phase. There is a general consensus that the cycle takes seven to ten years, nearly to complete itself. Business men are convinced that prosperity does not continue indefinitely nor does a depression last for ever. One must give place to the other and the cycle thus goes on. The intensity and the duration of each phase corresponds to the intensity and the duration of the other. No uniform duration can be expected but the upward and the downward swings are sure to follow each other as day follows night. Chapman compares these trade movements to the disturbed oscillations of a pendulum when a kitten is playing with it. The business men have developed such an uncanny insight that they know when to expect the one or the other, so high is the degree of periodicity exhibited by trade activity in modern times.

The second characteristic is synchronism or its all-embraciveness. The business world is one economic unit, one system like a living organism. A pinprick in the foot of a man sends the shock throughout the system. Toning up of the stomach is bound to strengthen the heart and the lungs. A healthy body generally contains a healthy mind. So is business. An attack on one part of the business organism is bound to send a shock to the other parts. If one firm is in grief, those who deal with it cannot remain unaffected and they in turn will affect others with whom they may be in commercial intercourse. If one industry is depressed, then those from whom it buys

1. Quoted by Marshall in Money, Credit and Commerce, p. 246.

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materials and accessories must suffer from contraction of demand. Further, when it dispenses with the services of some employees, they lose purchasing power and those industries which cater for their requirements are bound to be affected. Thus depression passes from one industry into another. Failure of some firms spells failure of others. Just as optimism is catching and one industry assists in, and stimulates the recovery of others, in the same way is pessimism infectious and a gloom in one industry invariably spreads gloom to other industries in close business proximity to itself and so on. The chain lengthens and the gloom deepens. The time comes that all industries in all districts and all firms in the country are engulfed. Few can escape the deluge.

Not only the general depression is spread over the length and breadth of the entire country but it also spreads abroad. Depression is no respecter of political boundaries. A crash in the Wall Street cannot but affect an Indian farmer living in a remote part of the country. Every country has business dealings with the others. The whole world has become interdependent economically. Booms and depressions tend to synchronise all the world over.

3. Erratic Price Movements of Primary Products. It has been observed that there are wider price fluctuations in agricultural products, *viz.* foods and raw materials. Mineral products fluctuate even to a greater extent, whereas price of finished articles moves within a narrow range. To the countries producing agricultural products their wide price fluctuations are a matter of grave concern for they affect adversely their income and the terms of foreign trade. India happens to be in this position and was consequently hit much harder by the depression (1929-33). The cyclical swings of prices may be initiated by changes in technique or economic activity in the industrial States which affect demand for raw materials.

The report of the Delegation on Economic Depressions of the League of Nations (Part II) published in 1945 mentions the following causes of the wide fluctuations in the prices of primary products:

(a) *Shifts of supply or demand or of both.* Shifts in demand are slight but supply is subject to fortuitous variations owing to climatic and other causes.

(b) Elasticities of supply and demand are relatively low, so that both consumption and production only react slightly to price changes. Both demand and supply are inelastic. The demand for basic foodstuffs being conditioned by physiological needs is inelastic. The demand for raw materials is also inelastic. "The greater the additional value incorporated in the intermediary stages, the smaller will be the price elasticity of demand for the raw material in comparison with that for the final product." Supply is also inelastic owing to the length of the period of production as well as to the fact that the producers are small and scattered, the product standardised

1. Report of the Delegation on Economic Depressions, League of Nations (Part II), 1945, p. 90.

and undifferentiated so that concerted action is difficult and no individual producer can by his own action appreciably affect prices. The direct money cost being small, the prices must fall a long way to affect his immediate production plans. As a rule he has no alternative but to go on producing.

(c) *Stock holding Policies.* These products can be safely and conveniently stored without fear of deterioration. Storing is common to ensure regular supply and is influenced by expectations of future price-changes.

We must remember, however, that synchronism is retarded internationally by four main facts.¹ (1) The greater transport costs, tariff barriers and quantitative trade restrictions, (2) greater immobility of labour, (3) autonomous currencies, (4) greater sensitivity of capital.

THEORIES OF TRADE CYCLES

4. *Climatic Theory.* An attempt has been made to explain the occurrence of a trade cycle especially its periodical nature in geographical terms. It is held that there are climatic cycles. In India it is believed that the monsoon follows a certain cycle of good and bad rain. Climate affects harvests which supply raw materials to industry.

Superabundance of raw material or its scarcity is bound to produce corresponding effects on industry. The failure of harvest gives the initial push and the depression spreads inevitably in the parts of interrelated economy. Periods of good harvests alternate with those of bad ones and hence booms and depressions follow one another. When harvests fail in some country the effect is transmitted abroad. Not only is the supply of raw materials affected but also the purchasing power of the growers is diminished which in turn adversely affects the demand for manufactured goods in the same country or abroad. A famine in India produced by a general failure of crops may lead to the closing of some Manchester or Japanese cotton mills. It is, therefore, quite understandable that failure of rain or an unfavourable climate can bring about a depressed state in the world of industry.

The advocates of the climatic theory emphasise that climatic variations occur fairly regularly. They, therefore, wish to explain not merely occurrence of the crisis but also its recurrence. For this the evidence is very scanty. There seems to be no scientific basis for such a theory. It belongs to the realm of conjecture.

One theory advanced in this connection is very well known, *viz.*, *Jevons Sunspot Theory*. Prof. Jevons says that some spots appear on the face of the sun periodically and they affect the emission of heat which in turn affects rain and harvests. Then there is the usual link of harvests with industry and depression spreads generally. Like the other climatic explanations of the crisis, Jevons Sunspot

1. *Ibid.*, p. 90.

Theory is regarded with scepticism. It is known for its novel explanation rather than for its scientific authenticity.

We can only say that variations in climate do affect industry and trade but we do not find in the geographical factor a complete and satisfactory explanation of the cyclical and general nature of the trade cycle. The world area under cultivation is so vast and the climatic conditions are so diverse that local variations are found to have only localised effects.

5. Psychological Theory. The climatic theory is an attempt to account for the trade cycle objectively or on the basis of external factors. But it is held that these external factors are weak in explaining the rapid spreading of the crisis or feverish overtrading indulged in by the business community. There are those, therefore, who take the aid of psychological factors in explaining the cause of a trade cycle.

It is pointed out that mostly the business is based on intelligent anticipations and the business community is often affected either by the wave of optimism or a wave of pessimism. 'There is self-engendered rhythm of collective error.' We have our moods. Sometimes we feel a little depressed and do not know why. At others we are in a mood of exhilaration without any apparent cause. Despair and hopefulness are both catching. Our moods are soon communicated to others. It is wrong to think, the advocate of this theory point out, that men's minds work in an isolated fashion. There is the herd-instinct among men and there is crowd-psychology. It is this crowd-psychology which explains the wider ramifications of a trade depression. When one business man is in a buoyant mood he passes this buoyancy on to those with whom he trades and so on.

People are sometimes confident and sanguine and are prepared to take risks and expand business. At other times they are dejected and apprehend failure. When one bank fails more failures are apprehended and a rush on one bank brings about its failure even though the bank may have been a sound one. The Peoples' Bank which failed in 1901 was such a bank. When a business man loses a bargain, not only does he lose money but he catches a defeatist mentality which has a further depressing effect on his business. When a man gains, he just thinks that business is on the upward swing and many others share this view and make further gains.

That psychological theory has an element of truth in it cannot be doubted. But it does not quite explain how the depression starts or how the recovery begins. These 'turns' in business are not satisfactorily explained by the psychological theory though it can explain all right how the upward or downward movement gathers momentum. It is a fact that business often continues good even though the objective causes making for business prosperity have disappeared. Similarly, it continues depressed even though the depressing factors no longer exist. The explanation lies in human psychology.

6. Financial Theory. There are writers who do not believe that the trade cycle depends on climatic factors or the vagaries of human nature. They would place the blame mainly and directly on financial organisation, i.e., the banking and the credit system. Their argument is something like this. The volume of trade very largely depends on the availability of media of exchange. Most of the business is done with borrowed money. When business prospects are good, the banks freely extend credit facilities through cash credit, discounting overdraft, etc. Few requests for accommodation are rejected. Assured of cheap and easy credit facilities, the business men go on expanding their business entering into further and further commitments. A huge superstructure of credit is built up. This superstructure can be maintained by the continuance of cheap money conditions if not their further extension. But a point is reached that a certain bank thinks it has gone a bit too far in the matter of advances. Probably its reserve ratio has fallen dangerously low. In self-defence it applies the brake, curbs further expansion of credit and begins to recall advances. This sudden suspension of credit facilities proves a bomb-shell to the business community. They have been counting on renewal of overdrafts and cash credit facilities. The bank's liberal attitude itself has encouraged them in this belief and now contrary to their expectations, moneys are being called in. They must clear the stocks and repay. There seems to be no other way out. This general desire for liquidity depresses the market for the stocks are being unloaded. Some firms, weaker links of the chain, fail to meet their obligations and bring to grief those whom they could not pay. Very solvent firms fail simply because they did not receive a timely financial assistance from the bank. The banks lent freely when they should not have done. They not merely helped the genuine trader but the speculator. It is with their help that a speculative boom was super-imposed on the genuine productive boom. But when the crisis comes and their help is needed most, they callously refuse to come to the rescue of those whom they had formerly helped to speculate. A helpful attitude in a crisis can save many and prevent a general financial crisis from developing. But as it is, bankruptcies multiply and a commercial crisis is converted into a financial crisis.

Now, it cannot be denied that banking institutions play an important part in building up trade activity. Finance is the life-blood of commerce. But it is a bit unkind to say that they cause a crisis. What can be safely said is that they aggravate matters. They prop up a boom by an over-issue of credit and they accentuate depression by its suspension. But neither the boom nor the depression originates with them. Secondly, a world phenomenon like a modern depression cannot be attributed to the isolated action of banks in one country. A trade cycle cannot, therefore, be exclusively attributed to the misbehaviour of money.

7. Competition Theory or Over-production Theory. Another explanation put forward for the occurrence of a trade cycle

is the operation of the competitive forces in a capitalist economy. It is argued that competition creates a trade cycle in two ways : (1) it leads to over-production which Chapman calls the positive aspect ; and (2) it raises costs of production—the negative aspect.

Under competitive economy there is normally a tendency towards over-production. There are so many rivals in every trade. Every one of them tries to capture as much business as he can. Each has got an eye on the whole market and is anxious to enlarge his own share of it. Everybody, therefore, is trying to increase production while existing firms are expanding output, new entrants jump into the field to benefit themselves by good trade prospects. Such being the case overshooting of the market is inevitable. A time comes when the market is glutted. Augmented supply depresses prices. This is one aspect or consequence of competition.

On the other hand, the cumulative effect of their action is to raise costs. In their efforts to expand output their demand for factors of production is increased. Every body wants more capital, more labour and more of other factors. The combined pressure must drive up the prices of factors. Costs rise. We have seen that their action is leading to a fall in prices. Costs overtake prices and profits begin vanishing. The weaker firms are liquidated till ultimately supply contracts raising the prices. The factors being idle in depression, their prices fall and conditions are ripe for recovery to set in. In the downward sweep competition aggravates matters. Every business man wants to save himself and this keen desire for liquidity brings failure and he, as a part of the productive system, cannot escape the injury. Competition thus explains the cyclical nature or periodicity of the crisis. In the words of Chapman, "The positive forces raise the output as the wind raises the waters of the sea, while the negative depress it as gravitation contracts the effect of the wind on the sea ; so that in the economic sphere we have waves of good and bad time like the waves of the sea." Socialists say that crisis is the by-product of competitive capitalism and so long as capitalism lasts crisis must recur.

But competition does not explain why crises should occur at regular intervals. It, no doubt, leads to over-production and the inevitable depression but it does not account for the actual duration of the time taken in the completing of the cycle. Nor does it offer a complete explanation of the generality or synchronism of the boom and depression. We can understand that competition may lead to over-trading, some time in some trades but we are not quite convinced that these phenomena should affect all trades simultaneously. Booms and depressions have their competitive aspects but we cannot find in competition a complete explanation of these phenomena

8. Over-saving or Under-consumption Theory. The Socialists school of writers has advanced another theory of trade cycles, viz., *over-saving or under-consumption theory*. The theory is associated

with the name of J. A. Hobson and has been further developed by Major Douglas. It is argued that there are wide disparities between the incomes of the rich and those of the poor people and the disparity is being accentuated as time passes. The rich people are not able to spend all their income. Saving, therefore, goes on automatically. These savings are usually invested in business and production is augmented as the result. But the wage-earners who constitute the mass of consumers get only a small remuneration as compared with the entrepreneurs whose profits swallow up a larger share of production. Profits are again invested. Thus production is being increased at every stage and the purchasing power of the consumer does not increase to the same extent. Too much saving means too little spending. There is thus a disequilibrium between demand and supply and depression must ensue, until prices fall sufficiently for goods to be carried off the market.

What is necessary to avoid a crisis is that the purchasing power of the consumers must be equal to the total costs of production. What happens is that the total costs incurred do not find their way into the pockets of the final consumer: a part evaporates in the way, e.g., a manufacturing company instead of distributing all the profits to the shareholders sets aside large amounts in reserve funds. Thus the consumers do not get a purchasing power corresponding to the costs incurred. No doubt rate of interest falls as capital accumulates but the fall is not sufficient to put off the evil day.

The argument has a degree of plausibility. But it is only a partial explanation of a crisis. One fallacy in the argument can be pointed out. If the purchasing power is not hoarded, it must reach ultimately the consumer. Saving is not hoarding. Saving means investment and as such it simply transfers the purchasing power from some people to others. Also mere increase in the capital cannot bring about a boom. Unless there is a prospect of profit the business men would not take out capital from the banks. Then again accumulation of capital must mean lower rates of interest and thus lower costs and so long as costs are less than prices, depression cannot come. All the same few can deny that under capitalism the saving power of the producers increases much faster than the purchasing power of the general body of consumers. The rich are becoming richer and poor are becoming poorer. The poor constitute the market for the goods produced by the rich and being poor they cannot buy all that is placed in the market. Hence a crisis.

9 Lord Keynes' View on The Occurrence of a Trade Cycle—Fluctuations in Investment. Lord Keynes attributes trade depression to a disparity between saving and investment. Total costs of production increased in the making of a thing represent the incomes accrued to the various factors contributing to the making of it. The aggregate cost of production of all commodities and services thus constitute total income accruing to the various members of the

community. A portion of these incomes is spent directly on the purchase of goods and services and the rest is saved. But if the saving is invested it, too, directly or indirectly creates a demand for goods. In case, however, it is not invested, but it is hoarded then to that extent the purchasing power of the community becomes inert and immobilised and goods already produced cannot be profitably disposed of. This will bring about a depression. If, on the other hand, investment is greater than saving, i.e., investment is stimulated and financed by credit created by the banks, then the over-issue of credit will raise prices and create a boom. It is thus, according to Keynes, a disequilibrium between saving and investment which is responsible either for a depression or for a boom.

Extra savings may result when real income increases or cost of living falls. Savings may also be increased if rates of interest rise more than the rates of profit. Benham mentions four sources of investible funds : amortisation quotas, new savings, new money and balances lying previously idle. New money is the bank's creation through loans or selling of securities. This is also called inflation. It results in what has been called forced savings because the consumers are compelled to curtail consumption on account of higher prices. The other type of saving, i.e. out of surplus of production over consumption is called voluntary saving.

Increased savings may not be followed by increased investment. They may simply lead to a reduction in the deposits of the traders. The equilibrium has been disturbed and dislocation of trade must ensue. Whenever savings increase, the rate of interest must fall sufficiently to induce investment and thus preserve a balance between savings and investment. Disequilibrium between the two will mean dislocation of business.

But we know that mere fall in the rate of interest cannot increase investment. Rate of interest is not the primary consideration for the entrepreneurs. They are guided more by the state of business. In Benham's words, "Entrepreneurs will expand their business, or start new ones, only if they expect the demand for their products to increase, or the costs of making and selling them to diminish sufficiently for them to sell a greater output than before at a profit." A low rate of interest is an invitation to the entrepreneurs to borrow. But the invitation may not be availed of. "You may take the horse to water; you cannot make him drink." Prof. Keynes' theory also does not throw any light on the periodicity aspect of a trade cycle. This is not to deny that fluctuations in investment¹ have an important bearing on alterations of trade conditions.

10. The Concept of the Multiplier. There are two multipliers which have figured in the discussions on trade fluctuations. The

¹ Investment may be gross or net. The gross investment is the total amount spent on the production and maintenance of producers' goods. If you deduct from it the amounts spent on mere maintenance of capital intact, i.e., repairs, renewals and replacements, the remainder will be net investment.

Investment Multiplier and the Employment Multiplier.

The Investment Multiplier is Prof. Keynes' gift of economic theory. Prof. Keynes seeks to define the relation between aggregate or gross investment and the increase in national income. When investment is increased, it adds to productive efficiency and consequently to national dividend. The ratio between the increase in investment and the increase in national income is called the Investment Multiplier. This ratio changes from time to time. It varies with the growth of technique of business and improvement in the efficiency of the factors of production or development of credit banking and of the means of communication and transportation. If this ratio or the Investment Multiplier is called K , then an increase in gross investment will lead to an increase in income which is K times the increment of investment.¹

The Employment Multiplier is associated with the name of R. F. Kahn.² "The Employment Multiplier measures the ratio of the increment of total employment associated with a given increment of primary employment in the investment industries."

Now that the war is over Indian industrialists are thinking of extending and modernising their plants. Some of them have visited America and England with a view to securing capital goods—machines, etc. Industries producing capital goods will receive stimulus. The amount invested in these industries is called primary investment. This investment creates employment for those who will be engaged in the making of machines. This is known as the primary employment. But when the machines are ready and are disposed of, they will be set up for production of consumers' goods. When production starts, more employment will be created. This may not happen at once as soon as primary investment takes place. There is always what is called a time-lag, i. e., the interval between the primary employment and the employment in the consumers goods industries. An increase in primary employment leads to increase in the total employment and the ratio between the two is called the Employment Multiplier.

11. Dr. Hayek's Theory. Dr. Hayek puts the whole blame of crisis on the over-issue of credit at an artificially low rate, a rate which is not warranted by the natural and genuine supply of capital coming out of current savings.

When voluntary savings are the only source of capital supply, then borrowing beyond proper limits will not be possible, for the rate of interest will rise sharply to put a brake on credit expansion. A balance between production and consumption will be maintained more or less.

But the equilibrium is rudely shaken in the case of forced savings, i. e., by inflation. As the expansion of credit depends on the bank's own sweet will, they can lend at rates lower than what would

1. Erij Narain—Principles of Economics, 1945, p. 266.

2. *Ibid*—p. 267,

have been charged if they had to depend on voluntary saving. Cheap money raises prices. The additional supply of money finds its way to the producers' goods industries. Process of production is 'lengthened' out or production becomes more and more round about or capitalistic. This new money ultimately reaches the final consumers through the payments to the factors of production. Prices of consumers' goods too rise. This leads to a diversion of resources from the earlier stages of production to the final stage. The earlier stages can be maintained by further expansion of credit. But the banks, mindful of their own safety and in sheer self-defence, refuse to lend further and there is a crisis. There is thus stagnation in the earlier stages. The crisis could have been avoided if the productive process had been completed by the time increased demand for consumers' goods appears. But this is not possible. Production is still going on when the remuneration paid to the factors has increased their purchasing power.

The theory is based on the fact that the resources of the community are limited. One aim can be realised by the sacrifice of another. One stage of production can be expanded only by the curtailment of another. When the final stage expands in response to increased demand for consumers' goods, then the factors must be withdrawn from the earlier stages. The factors which are specific cannot be moved but they have to remain idle, for the non-specific factors in conjunction with which only they could work, have been withdrawn. The earlier stages of production are dislocated and become unremunerative, for the banks later begin to charge too high rates to put off the borrowers. The whole mischief lies, according to Dr. Hayek, in too facile credit which helps in building up business beyond the limits of prudence.

Dr. Hayek's theory is based on the assumption that saving and investment are in equilibrium and that the equilibrium is upset by the banking policy. This assumption does not hold good. Prof. Keynes theory, we have seen, is based on the fact that there is disequilibrium between saving and investment. It further assumes that the resources are in full employment and creation of credit necessitating a diversion from some phases of production to the others creates dislocation. But factors are seldom fully employed. There is always, even in the busiest periods of business, a margin of unemployment. It follows, therefore, production can expand in any of its stages without necessarily dislocating any other stage. Again, the theory seems to be opposed to common-sense when it says, that the increase in demand for consumers' goods does not mean an increased demand for the creation of producers' goods. Finally, the theory seems to imply that creation of credit is always harmful. Over-issue of credit no doubt has sometimes serious repercussions, yet the instrument of credit can be welded sometimes to great advantages of the community. A low rate may stimulate investment when the country has been in a state of economic stagnation. Dr. Hayek's theory does not explain the cyclical nature of trade depression.

12 Causes of Trade Cycles. We have covered a very controversial ground. Indeed no subject in Economics is subject to so much dispute as the causes of a trade cycle. There is a kernel of truth in each theory but we have seen we cannot rely solely on any of them to explain to us either the cyclical nature of the trade movements or its generality. Trade cycle is a very complex phenomenon. We shall in vain look for a complete explanation of a trade cycle in any one theory. A trade cycle is the resultant of a combination of causes of diverse nature. Climatic causes hinder or help production and provide the objective forces of the trade cycle; psychological factors represent the subjective conditions, and create waves of pessimism or optimism. Monetary causes accentuate the upward and the downward movements, competition and over-saving are responsible for over-production and under-consumption. So many factors conspire to bring about a crisis.

S. E. Thomas sums up the causes of trade cycles under the following three heads :—

- (a) Unforeseen causes affecting the supply of raw materials;
- (b) Imperfect adjustment of demand and supply; and
- (c) variations in the prices due to financial causes.

(a) *Causes affecting the supply of raw materials.* Supply of raw materials may be adversely affected by such factors as unfavourable climate, too much or too little rain or untimely rain, pests, earthquakes, wars, etc. A prolonged and general strike is also a dislocating factor. Shortage of raw material will certainly make capital equipment idle. A modern crisis is not merely the outcome of shortage of raw material but also its super-abundance. Starvation in the midst of plenty was a common phenomenon of the last depression. This was due to the maladjustment between demand and supply.

(b) *Imperfect adjustment of demand and supply.* Modern production is a very complicated and prolonged process. Thousands of people living in remote parts of the world contribute to the production of a single article of a very ordinary use. Productive activity is, again, directed by the isolated and unco-ordinated decisions of countless entrepreneurs. No wonder, therefore, that sometimes there is too much production at one stage and too little at another. For example spinning capacity may expand beyond the weaving capacity of the cotton mill industry. The discrepancy produces a depression in the spinning industry which of course in time spreads forward and backward. If productive machinery is to work smoothly there must be a perfect balance between the two adjacent stages of production. But of this there is no guarantee. Probability, on the other hand, is that there will be a disequilibrium. When production at different stages takes place in different lands, it will be simply a miracle if there is the right balance between production and demand at different stages. Competition is sure to lead to over-pro-

duction. Psychological factors account for over-trading. Lack of co-operation and understanding between the producers leads to blind action and a catastrophe.

Further, production is undertaken in anticipation of demand. The modern productive processes being too lengthy and round-about, the anticipation is based on a long range policy. But so many factors may crop up in the meantime to falsify the entrepreneur's calculations, e.g., change in custom and fashion, appearance of a substitute, the production of a new design by a new type of machinery, or war may intervene. Any of these factors may render capital investment useless. Many Indian business men were deceived when after the war (1914-18) they ordered machinery from England thinking that the government would be able to maintain 2s. ratio. But when the goods arrived the ratio had fallen considerably. So many things can happen to put the productive machinery out of gear.

(c) *Variations in the price level.* Prices may shoot high when there is inflation either because too much money is being issued by the currency authority or the commercial banks are recklessly expanding credit. A rising price level engenders speculation and then the inevitable crash. Inflation is generally followed by a policy of deflation. The deflationist tendencies after the war (1914-18) produced unparalleled depression. Price level is very sensitive. The end of the war is sure to bring the price level down and everybody is expecting the depression to come. We have already seen that the financial factors accentuate both the upward sweep and the downward sweep of a trade cycle, the reckless lending, the former, and curtailment of the credit, the latter.

13. Remedial Measures to Fight an Economic Crisis. Lack of unanimity as to the policy to be followed in a crisis is even more marked than the lack of unanimity about the causes thereof. For a complicated malady no simple medicine can be prescribed. Most of the economists are agreed that under the existing economic order crises are unavoidable; you can only delay or mitigate their severity when they come. We need, therefore, two sets of measures: the preventives and the curatives.

For preventing or avoiding a crisis, the remedy will depend on the diagnosis. The influences of climatic factors on the supply of raw materials cannot be ruled out altogether. In a country like India, where nearly three-quarters of the people depend on agriculture, it is necessary that dependence on rains should be removed as far as possible so that agriculture no longer remains a gamble in the rains. A network of canals, wells, tube-wells and reservoirs may be provided to ensure an adequate and regular supply of water. Other external factors like wars, earthquakes and epidemics cannot be provided against. They do not play an important part in a trade cycle. At any rate they do not occur with any degree of regularity.

Imperfect adjustment of demand and supply can be rectified by collecting and disseminating correct and up-to-date statistical information about the condition of crops, quantities of goods produced

by the main industries, state of employment, imports and exports, *per capita* income, price and cost of living index numbers and of company floatations and profits. This will help the business man to form an intelligent forecast of the probable changes in the demand and supply of certain types of goods. The intelligence bureau may issue directives and warnings from time to time so that under pessimism or optimism is nipped in the bud. In the boom period the companies may be asked to follow a cautious policy in declaring dividends and building up reserves.

A sound banking system and a sound monetary policy are also essential to act as a stabilising influence on business activity. Manipulation of the bank rate can put a timely brake before the things have gone too far.

But with the best of precautions it may not be possible to avoid a crisis altogether. Where preventives, therefore, will not do, we must be ready to fight depression when it has at last overtaken us. In that case the Central and the local governments must launch a bold public works policy of road building, railway extension, a public building programme, even though the work undertaken may not in any sense be productive, it may be what has been called *Piramidenbau* (building the pyramids), yet it will provide employment, supply some purchasing power and thus keep up the morale. It will remove causes of crisis which are purely due to mental depression.

A more sympathetic policy on the part of the banking system will also be necessary. The banks must come to the aid of parties who are otherwise solvent but find only a temporary difficulty in meeting their obligation. The Central Bank should see that credit facilities are not seriously curtailed. It may assure the banks of its support in case they find themselves in a difficulty.

These are some of the measures that can be adopted to alleviate suffering. But these are all palliatives. The world has not been able to discover any panacea or sovereign remedy for a commercial crisis. Nothing short of reorganisation of the economic system can provide against the recurrence of crises. These are by-products of capitalism and so long as capitalistic system of production continues such disturbances must take place. A planned economy or some form of socialism may remove such a contingency.

Even a socialist State will commit mistakes about organisation of production. Even it will have to anticipate demand. No human organisation can be infallible, yet planning of the entire economic field will so co-ordinate the various economic activities that maladjustments will be rare phenomena. Even when dislocations do occur, the vast resources of the State can easily meet such situations. No failure of individual firms or displacement of labour will take place; losses can be easily borne. When the whole world was suffering from acute depression and unemployment during the early 'thirties no such dark clouds threatened the economic horizon in Russia. Planned economy seems to be the best way of not only preventing a crisis but also of fighting it.

CHAPTER XLIII

PUBLIC ECONOMICS

1. Necessity for State Intervention in the Economic Sphere.

State is a political society. It has been formed for the realisation of some common ends. Its ultimate aim is the promotion of human welfare. As such a State must take notice of the economic activities of its citizens. Of all activities those that are economic in character are most vital to human welfare. No State can effectively and satisfactorily work towards its ultimate end by ignoring, therefore, the economic activities of the individuals.

We cannot agree that the State is an end in itself. Some economists used to say that Economics was the handmaid of politics. But it is more true to say that politics is the handmaid of Economics. The economic aim—the removal of poverty—is the more important aim and the political structure must be so shaped as to subserve this aim. For example we want to remove poverty from India. The Indian constitutional set up must be such which can help us in achieving this aim. If economic planning is essential for the raising of the standard of living of the Indian masses, the constitutional arrangement must make central direction of all phases of economic activity possible.

It is now generally recognised that State control and interference in the economic sphere are essential for promoting general welfare. Economics is concerned with consumption, production, exchange and distribution of wealth. If chaos is bad in the political world, it will be worse in the economic world. It is realised that the State must step in to make economic activity orderly and fruitful. The State must regulate Consumption and Exchange, it must assist Production and ensure equitable distribution of wealth. If we are concerned with the disposal of scarce means for the satisfaction of our multiple wants, the need for State action seems to be obvious in order to make sure that the use of the scarce means is economical and is conducive to maximum satisfaction, of the human being forming the body politic.

Necessity of State interference is thus obvious for the attainment of economic ends.

2. Different Views About the Extent of State Activity.

It has been well said that "political theory has been conditioned by environments." As the environments have changed, the political views about the proper sphere of State activity also underwent a change. There has been a singular lack of unanimity among political thinkers about the extent and mode of State interference. We can broadly distinguish the following main types of political thought.

The Anarchists. They believe in the negation of the Government. They think that a stage would be reached when man will

have been so much morally lifted, that the Government would become unnecessary; it will 'wither away.' The society will regulate itself. This is just a dream of political visionaries. This is an extreme view.

The Communists. On the other extreme are the Communists. Far from being eliminated the State will be a live and powerful instrument for the achievement of economic ends. The Communists would subject economic activity of the individuals to minute supervision and regulation. Everything will belong to the State and the Government will organise and direct all economic activity. The individual will be a mere pawn in the game. Some would call it economic serfdom. This state of affairs is yet beyond practical politics.

Between these two extreme views—views which have not been put into practice—there are two other views which have actually shaped political policies. One of these views is what has been called individualism or economic liberalism.

The Individualists. The individualists regard State as an evil, though a necessary evil. They believe that human welfare is best promoted if economic activity proceeds unhampered and unfettered by any State interference.

In the words of a French Physiocrat Francois Quesnay "the surest guardian of internal and external commerce, the most exact and profitable to the nation and State, lies in the unlimited freedom of competition." Adam Smith in England preached the gospel of economic liberalism. According to this school of thought the Government is to perform the bare minimum of functions. It is to be a police state, maintenance of law and order being its sole concern. There is no room for factory legislation and social security schemes. This view obviously ignores the reasonable needs of society. Individualism has been discredited both as a political principle and as a guide for State action. The bases of individualism have been long exploded. No body now seriously believes that every individual understands his self-interest or has the power to realize it. Even J. S. Mill, the staunch advocate of *laissez-faire* had to recognize certain spheres of State interference.

The Collectivist or the Socialist View. The collectivists and the socialists hold entirely different views. They emphasise the social interests as distinguished from the rights and the privileges of the individuals. Far from considering the State as a necessary evil, they regard State as a very useful and desirable institution and they would heap on it vast and almost unlimited powers. They would justify all interference by the State if it helps to promote social welfare. There is no limit to State interference except the important condition that it must result in addition to human welfare.

3. *The Modern View.* There is a strong swing towards socialism or collectivism in the modern view about State activity. The statesman of today places no limitation on the authority of the

Government to interfere in the economic sphere. The sole criterion is whether State activity directly or indirectly is conducive to the benefit of the society. Leon Duguit says, in his 'Law in the Modern State', "whatever is essential to the smooth running of society is a public service."

For some time financial considerations governed State action. Profit was the touchstone. All State activity hinged on the question 'Does it pay?' The following passage excellently sums up this attitude.¹

"J.M. Keynes has called the nineteenth century an accountants' nightmare. No work is to be done unless it 'paid'; every activity was subordinated to financial calculations. We built slums because they paid better than decent houses; we disfigured the countryside, wasted our great river basins, razed our forests, partly from ignorance but mostly because it 'paid' for the moment. We would not put the unemployed to work on public improvements because it did not pay. We have to remain poor because it does not pay to be rich. We have to live in hotels not because we cannot build palaces but because we cannot 'afford' them. This rule of self-destructive financial calculation governed every walk of life."

This was indeed a tragic handicap but luckily almost removed now. Financial considerations are not altogether irrelevant; but it is now recognised that any public expenditure which seeks to develop natural or human material of the nation is justified and may be considered 'to pay'.

As times have passed the governments have been forced by the logic of circumstances to assume more and more functions, so that the sphere of State activity has constantly widened and become more and more diversified. The world war (1914-18) made a strong breach in the *laissez faire* doctrine. The worldwide and unprecedented economic depression of the 'thirties called upon the governments everywhere to come out with bold economic policies. The American New Deal touched every phase of economic life. The global war that has just ended has brought the State as a regulator of economic life to the forefront. State control and regulation have been extended to cover every aspect of economic life. It touches us as consumers and producers and not merely as citizens. And there is no going back. "Collectivism," says Chase, "is upon us, horse, foot and guns."² According to him 70% of all Europeans are now living in the shadow of State-controlled enterprise and the question is merely shall business men become rulers or rulers become business men?

The modern economist has little scruples about limits of State activity. The governmental machinery is now being freely utilised in carrying out an economical allocation of the resources of the community and in affecting the distribution of wealth in a variety of ways. Either the Government does these things directly, or indirectly through a stringent control over private enterprise.

1. Kinley—Government Control of Economic Life, 1936, pp. 11-20.

2. Chase, S.—Government in Business, 1935, p. 5.

We can sum up the modern view in the following words. "It came to be recognised that the State has duties other than the provision of an army, a navy, and police, and that defence of quite a different kind was necessary. The community as a whole must unite to enforce right against might; to protect the economically weak against the economically strong, to prevent the exploitation of the poor by the rich, and to fight the evils of poverty and disease with their destructive effects upon the social and political order."¹

4. Functions of a Modern State. Different writers have offered different classifications of the functions of State. Adam Smith gave threefold classification (a) "The protection of society from the violence and invasion of other independent societies"; (b) "the protection, as far as possible, of every other member of it, or the duty of establishing an exact administration of justice;" (c) and "the duty of erecting and maintaining those public institutions and those public works which, though they may be in the highest degree advantageous to society are, however, of such a nature that the profit could never repay the expense to any individual or small number of individuals."

J.S. Mill gave twofold classification: (a) Necessary functions providing security and justice; and (b) optional including all the other functions.

The following classification of the main functions of the modern State may be considered as fairly acceptable:—

(i) *Protective functions.* These functions include provision of security from external aggression and maintenance of law and order within the country. This is the primary function of any State.

By some writers this has been called unproductive activity. But this is not quite a correct view. No doubt this form of activity does not yield any material or tangible return in the narrow economic sense, yet in a broad sense and indirectly the activity relating to defence may be called productive. Unless a country is properly protected, no productive activity can be carried on. This activity is, therefore, essential to the carrying out of other activities of the State which are called productive.

(ii) *Administrative functions.* Besides the military and police force whose duty is the defence of the country, both internal and external, every Government engages and maintains a host of administrative officials and agencies whose duty is to administer the various departments and subjects. The administrative functions relate to the carrying out of the routine work of the Government.

(iii) *Social functions.* Under this head are generally included functions like the provision of relief for the poor, the sick and the unemployed. Social insurance including health and unemployment insurance and the granting of old-age pensions is now considered a very essential function of all civilized Governments. Very comprehensive and ambitious schemes of social security, which aim at

banning want and fear from among the masses, are on the anvil in most of the leading countries of the world. Besides these, the Governments of today provide museums, public parks, libraries, education, medical aid and undertake the responsibility of providing decent housing facilities.

These functions do not pay in the narrow sense of the word but are considered highly fruitful and productive from a broader point of view. They develop the natural and the human resources of the nation.

(iv) *Economic and Commercial Functions.* In Economics we are mostly concerned with these functions. They concern all Government activity in connection with trade and industry.

They include : 'The facilitating, encouragement, regulation and control of business.'

Let us study in greater detail where the Government intervention in business is essential and what forms it takes.

5. According to S.E. Thomas State intervention in economic affairs is justified in the following cases².

(i) *When the business is of a monopolistic nature.* Whenever there is a monopoly there is a strong presumption of exploitation by the monopolist of the general body of the consumers. It becomes the duty of the Government to prevent this exploitation and the abuse of monopoly power. The Government may have to exercise close supervision over the working of a monopoly and may have to go even to the length of fixing the price of the monopolised product. The consumers are in a helpless state before a monopolist and the Government, as the guardian of the general interests, must intervene to protect them.

(ii) *Where private enterprise would not be attracted.* This generally happens when no return can be expected on investment, e.g., schools, hospitals and roads. Such enterprises cannot yield handsome dividends and must, therefore, be undertaken by the community collectively. The Government must also step in where private enterprise is deterred, for no return may be expected in the present generation, e.g., in schemes of afforestation, anti-erosion schemes, etc.

(iii) *Where the economically weak require protection:* The factory workers are in an extremely vulnerable position and must be protected by suitable legislation against the all-powerful employers. This is especially the case in sweated trades.

(iv) *Social monopolies or Public Utility Services.* Railways, posts and telegraphs services, water supply and supply of electricity or gas are generally put under the category of public utilities. In such cases it is obviously uneconomical and undesirable that there should be competing concerns supplying the service. Municipal or Govern-

1. Thomas, S.E.—Elements of Economics, 1936, p. 616.

2. Ibid, p. 605.

ment control over these services is essential to ensure a regular and cheap service. This is, therefore, a fit sphere for Government intervention.

(v) *Where the consumer's interest may be prejudiced.* An average consumer is not considered competent to form a correct judgment about the quality or the purity of the commodity supplied to him. He is, therefore, not in a position to safeguard his interests. The Government must come to his aid. We, therefore, find that laws against adulteration are on the statute book in all countries. The Government intervention is considered essential for the protection of the consumers against the fraudulent practices of the producers.

(vi) *Where State management and control are dictated by political or social as well as economic considerations.* The obvious examples are the supply of currency and the manufacture of armaments. It is now recognised that the issue of currency notes by private agencies is fraught with serious risks to the whole community. State control and regulation of currency are absolutely essential if the economic machine is not to be thrown out of gear. Similarly, manufacture and sale of armaments cannot be entrusted to private enterprise without being a menace to peace and tranquillity in the country. Research on atomic energy is being kept a closely guarded State secret.

6. Forms of State Intervention in Business. Let us now see how the Government activity is directed towards the assistance of trade and industry in the country. We may distinguish, broadly, the following chief methods of Government assistance or intervention in business.

(i) *Facilitating.* The Government provides innumerable facilities for business men without which it will be almost impossible for them to carry on. Among the important facilities may be mentioned the provision of currency, means of communication and transport, fixing of weights and measures, passing of commercial laws etc. All these facilities provide the necessary framework for the carrying on of trade and industry. We, in India, are not very well equipped in this respect. Means of communication and transport are inadequate considering the area and the size of the population of the country. Banking and credit, too, are not well developed. This lack is in no small measure responsible for our economic backwardness.

(ii) *Encouraging.* Provision of facilities mentioned above is hardly considered adequate in modern times. Such a passive attitude on the part of the State cannot ensure a measure of prosperity which a country can attain. It is, therefore, felt that a Government must actively encourage business or economic activity in the country. The encouragement may take a variety of forms.

A suitable fiscal policy can go a long way to bring about an industrial prosperity in the country. The domestic industries may be protected against foreign competition by the levy of import duties

or foreign imports may be regulated by means of a quota system which may limit the scope of foreign competition. The Government may directly encourage an industry by granting bounties or subsidies.

Bilateral or multi-lateral trade agreements may be negotiated for the benefit of the country's commerce. In recent years we entered into a series of agreements with the U. K. and Japan although expert opinion in India was not convinced that these agreements were wholly beneficial to India.

There are several other aids to industry which Government can supply, e.g., provision of industrial education and research, industrial intelligence and statistics, financial aid either by loan or subscription to share capital or the purchase of debentures or guaranteeing a minimum return on capital. The Government can assure its own custom and undertake to make all store purchases from the home manufacturers. The Government can help the industrialists in purchasing suitable factory sites at concession rates. These are some of the ways in which Government can encourage trade and industry. It is needless to say that a policy of active State encouragement and sympathy can bring about an industrial revolution within a generation.

(iii) *Regulating.* State intervention is also essential to regulate business activity in the country to curb the undesirable and unsocial propensities of the entrepreneurs. Unregulated and unrestricted competition resulted in the past in serious social evils which were enough to shock the social conscience. The greed and the selfishness of the factory owners in the early stages of the Industrial Revolution led to the most callous treatment of the workers. The statesmen were awakened to the dire necessity of State regulation of economic activities of private individuals. Factory Acts were passed. There are provisions in the law for the safety of workers in railways and ships. Compensation is granted for accidents, and schemes of social insurance are in force in all leading countries. Minimum wages are fixed. The interests of the consumers are protected by the strict regulation of public utility services.

(iv) *Control.* In some spheres the States do not content themselves merely with facilitating, encouraging and regulating business. They go further and institute a strict control over the economic life of the citizens. In the Fascist States of Germany and Italy State controls reached their farthest limit in peace time. There was strict regimentation of both production and consumption. The people have now become fairly familiar with the system of economic controls during the war that has just finished. Although the war has ended the controls continue. There is exchange control, import and export control, control on prices and control on capital issues. The economic activity of the community has been muzzled. Such controls become essential when the nation is passing through a crisis.

(v) *State Ownership.* The most drastic form that State intervention takes is the abolition of private ownership of industry. Bank of England and the British coal industry are going to be nationalised. In some cases it is considered that the interests of the nation at large will be served best if private enterprise is eliminated. The society works to appropriate the profits in certain lines of economic activity so that these profits, instead of going to enrich private individuals may be spent for the benefit of the society in general. There is a strong trend nowadays towards collectivism or nationalisation. The superstructure of unfettered capitalism may be seen crumbling in the citadel of private enterprise itself.

Select References.

1. Kinley—Government Control of Economic Life.
2. Chase, S.—Government in Business.
3. Thomas, S. P.—Elements of Economics, p. 559 onwards.
4. Dalton—'Public Finance'.
5. Findlay Shirras—'Public Finance.'
6. Brij Narain—Principles of Economics, p.p. 375-383
(S. Chand & Co.)
7. Pigou—Public Control of Industry,

CHAPTER XLIV

PUBLIC FINANCE

✓ 1. **Importance of Public Finance.** 'Money makes the mere go' is a very common saying. Every body realises the importance of the necessity of money in all he does. A consumer is handicapped in the satisfaction of wants by the lack of sufficient income. An entrepreneur cannot carry on production in the absence of adequate funds.

If the importance of money is great to an individual it is greater still to the Government. In the previous chapter we have seen the many functions which we expect a modern Government to perform. It is quite obvious that for the performance of these functions money is needed. The strength of a nation is reflected by its budget. The extent of State activity and its efficiency are primarily dependent upon the length of its purse.

We often complain that educationally India is very backward, that the system of medical relief is utterly inadequate and that agriculture and industry in India are now on the most primitive lines. Why is it so? There is only one answer. No money. The amounts spent on beneficent services in India are ludicrously low as compared with civilised standards. With the meagre resources placed at the disposal of the nation-building departments, no spectacular progress can be expected. 'The revenue of the State,' it has been said, 'is the State.' Everything depends upon it. Kautilya, the earliest of Indian economists writing more than 2000 years ago, said: "The beginning of every undertaking is finance."¹

Apart from this, the system of public finance in a country affects the entire economic field. It is no longer considered as a mere means of raising State revenues. To use Colbert's words, it is no longer considered simply "the art of so plucking the goose as to secure the least amount of squealing." On the other hand, public finance is now regarded as a powerful instrument of social justice. It is employed by modern Governments to bridge, as far as possible, the gulf between the rich and the poor. An equitable system of finance would tax the rich and spend the proceeds in the supply of such services which are calculated to benefit the poor primarily. These ulterior motives of public finance have today assumed a very great importance.

✓ According to Dalton the most fundamental principle of public finance is what he calls the Principle of Maximum Social Advantage.² Public finance operations effect a series of transfers of purchasing power. The tax transfers the purchasing power to the Government which is then transferred to the individuals whom the Government

1. Shriras, Findlay—Science of Public Finance, 1936, Vol I, p. 2
2. Dalton, Hugh—Principles of Public Finance, 1943, p. 10-11.

makes the payment such as Government contractors and Government servants. The one aim underlying all these transfers is the attainment of Maximum Social Advantage. The tests of Social Advantage, according to Dalton, lie in the preservation of the community and the improvement of both Consumption and Production.

To an economist who is primarily concerned with the promotion of human welfare, the importance of the study of public finance is indeed very great.

2. What is Public Finance ? But what do we exactly mean by the science of Public Finance and what is its scope or subject matter ? In Public Finance we study how Governments raise their revenues and how they spend them. In the words of Armitage Smith, "The investigation into the nature and principles of State expenditure and State revenue is called Public Finance."¹

But the science of Public Finance, as it is understood to mean these days, is not merely concerned with public expenditure and public revenues as such. Its scope is much wider. It includes the study also of the system of financial administration, i.e., budgeting, auditing, etc. A definition which is nearer the truth is that "Public Finance deals with the provision, custody and disbursement of the resources needed for the conduct of public or governmental functions."²

In the words of Bastable, "Public Finance deals with expenditure and income of public authorities of the State, and their mutual relation as also with the financial administration and control."

Broadly speaking, therefore, the study of the science of Public Finance may be split up into the following main divisions :—

- (a) The classification of, and the principles underlying, public expenditure ;
- (b) The methods of raising public revenues and the principles of taxation ;
- (c) Financial administration including the preparation and sanctioning of the budget, auditing, etc. ; and
- (d) Public Debt—a study of the principles and methods of public borrowing.

3. Distinction Between Public Finance and Private Finance.³ Before we launch on the study of Public Finance it may not be without interest to note some differences between the Government finance and that of an individual. It will help us to understand the difference in the method of approach of a Government as well in the aim of public authority as distinguished from that of an individual.

1. Armitage Smith—Principles and Methods of Taxation, 1935, p. 14.

2. Lutz, Harley Leist—Public Finance. 1936, p. 3.

3. For a fuller discussion see Findlay Shirras—Principles of Public Finance, 1936, Vol. I, Ch. IV.

1. *Adjustment of income and expenditure.* To an individual we preach "cut your coat according to your cloth". But the Government first settles the dimensions of the coat and then proceeds to arrange for the cloth required. In other words, the individual must live within his income, i.e., he must adjust his expenditure to his income. On the other hand, the Government first prepares an estimate of expenditure and then devises ways and means to raise that sum, i.e., the Government, unlike the individual, adjusts its income to expenditure settled beforehand.

This, however, is not always true. The individual, too, sometimes first takes a note of his obligations and commitments and then tries to work up his income to the requisite figure. He may have to work harder, work over-time and do his best to raise his income to his expenditure. A doctor may sit longer at his place of business; a lawyer longer at his desk and a teacher may take up private tuition work. Thus each tries to make his both ends meet. An individual must also try to balance his budget. Thus it is not always correct to say that an individual cuts his coat according to his cloth. He also sometimes knows the size of the coat and must somehow find the cloth.

In the same manner, the Governments also, sometimes, act like the individuals in adjusting their expenditure to income. When the Government realises a surplus, it may decide to increase expenditure in certain desirable directions. The Punjab Government has had a series of surpluses and it became more generous to its employees and granted liberal dearness allowances, revised the scales of pay, and also created new special funds like Peasants' Welfare Fund, Special Development Fund, etc. The East Punjab Government has inherited a portion of these funds. Also, when the public revenues shrink, then the Government tries to bring about a corresponding reduction in its expenditure through a policy of retrenchment.

But, on the whole, we can say that there is a real difference in the approach towards the problem of finance between an individual and the Government. The individual ordinarily knows his income and he must arrange his scheme of expenditure accordingly. The Government, on the other hand, first calls for an estimate of expenditure from the various departments, settles the total expenditure and then levies the taxes accordingly.

2. *Period of time.* For the public authorities, the unit of time for the budget is one year. But the individual attaches no special sanctity to the period in which the earth revolves round the sun. He need not balance his budget by a particular date or during a given period. He goes on earning and goes on spending and few householders keep their accounts by the year. Sometimes they go on having surplus from year to year and at other times for years go on living on past savings. No doubt the Governments, too, sometimes realise surpluses for years and keep them for future use, and sometimes they have to make up by borrowing for a series of deficit budgets. But this cannot go on. Abnormal times apart, the Govern-

ments must try to balance their yearly budgets. They work by the year which the individual generally ignores in his financial arrangements.

3. *No internal borrowing for an individual.* In their resources, too, the Governments and the individuals differ. When hard pressed the Government can borrow both at home and abroad, i.e., it can raise either an internal loan or an external loan. But the individual can only borrow from others and not from himself. The only way open to him is external loan but no internal loan. True, if he keeps two separate bank accounts for two purposes, he may temporarily draw upon a different bank account. But by no stretch of imagination can we call it a loan.

4. *Inflation, a peculiar privilege of the Government.* There is another source of income open to a Government. It can have resort to the printing press. All belligerent Governments, more or less, printed currency notes to meet the huge war expenditure. The Government of India did it more than the Governments of U. K. and the U.S.A. During the war (1914-18) Germany almost ruined itself by the reckless issue of currency. When the Government feels that the taxable capacity of the nation is over-strained and public debt has been shaken a bit, it can use this 'hidden hand', wave the magic wand and create money. Can the individual do it? Not unless he is prepared to go behind the bars.

5. *Equalising Marginal Utilities.* We have seen that according to Law of Equi-Marginal Utility, every individual so tends to arrange his expenditure that he gets the same marginal utility from every unit of money that he spends. For this purpose he consciously weighs the utility of buying a commodity and the utility of parting with the money. But when the Government, an impersonal entity, spends money such conscious weighing is not possible, for utility is subjective. But this does not mean that public expenditure is indiscriminate. Here also we may say that the Finance Minister does roughly try to get the same marginal utility from public expenditure for the community as a whole. As a custodian of public interests he may spend public funds on works of greater utility than those of less utility. But the subjective element is less prominent in public finance than in individual finance.

6. *Deliberate and big changes in Public Finance are Easier.* For an individual big and deliberate changes either in income or in expenditure are not so easy. Every body likes to supplement or double his income. But how many can do it? In the same manner departure from the set expenditure is difficult. A man gets used to a certain standard of living which does not admit of easy alterations and adjustments. Any consideration of curtailment of expenditure is painful. But the Governments are in a much better position to make big and fundamental changes in the scheme of public income and public expenditure. If a socialist party comes into power, it will surely make revolutionary changes both in the State income

and State expenditure. The individual finance lacks this elasticity or adaptability.

7. *Provision for the Future.* In the matter of providing for the future the Government is much more liberal and far-sighted. The statesman is a trustee for the future generations. The Governments spend large amounts of money on schemes of afforestation, public works or social security schemes on which either there may be no monetary return or the return may be delayed for generations. The Mandi-Hydro Electric Works have been running at a loss. The individuals, on the other hand, are anxious to reap quick returns. Human life is so uncertain that some individuals discount the future at a very heavy rate. They cannot look beyond their noses sometimes. Few can take much interest in their descendants beyond a certain line, endowment insurance policies are more popular than life policies. But the community outlasts the individual. It exists in perpetuity. Hence the States are bound to make a solid provision for the future.

8. *Surplus budgeting is a virtue for an individual but not for the State.* A prudent individual must earn more than he spends. He must have a surplus budget and save. For an individual this is considered a necessity and a virtue. But for a State it is not so. Deficit budgets are bad and indicate unstable finance. Surplus budgeting, however, is not necessarily a virtue. It may mean that the level of taxation is kept unnecessarily high and public expenditure is kept unduly low. Certain departments, the beneficent and nation-building departments, may be starved. The Punjab has enjoyed a series of handsome surpluses. The times were abnormal. The revenue side swelled in some cases to an unexpected extent. Care seems to have been taken to keep the expenditure within reasonable limits. This husbanding of the resources has been a wise procedure. It would have been certainly unwise to launch on certain ambitious schemes of public expenditure when the times were so uncertain. This is all right. But the point is that to make a surplus budgeting a normal feature is not good finance. We should not make a fetish of a surplus. If big surplus recur from year to year, it is better either to give relief to the tax-payer or to increase the scale of social expenditure.

9. *Individual finance is shrouded in mystery.* Secrecy surrounds individual finance. Every man of money must avoid the unwelcome gaze of others. Individual credit is supposed to depend not on what a man has but on what he is supposed to have. He must keep the people guessing and try to give them some vague and exaggerated idea about his financial position. But publicity, on the other hand, is the essence of public finance. Budgets are published and widest publicity is given to them. Publicity is intended to strengthen, rather than weaken, public credit.

These are some of the features which distinguish public finance from individual finance.

PUBLIC FINANCE

4. Introduction. Of the two important aspects of public Finance, viz., Public Revenue and Public Expenditure, let us study first Public Expenditure.

This department of public finance received scant attention at the hands of the writers on public finance throughout the 19th century. Attention was almost exclusively focussed on public revenues. It is only in the present century that it came to be realised that public expenditure is far more important in its implications and bearing on public welfare. These days, therefore, an attempt is made, in discussions on public finance, to study the nature of public expenditure and the principles underlying it, and its effects are carefully analysed.

For this early neglect of the subject of public expenditure, the main reason seems to be that the amount of public expenditure was very small, as the field of governmental activity was very narrow. The theory of individualism held a complete sway of the statesman's mind and he was prepared to entrust to the Government only a bare minimum of the functions. Naturally, therefore, the discussion on public expenditure did not loom large. Now that the public expenditure has reached astronomical figures on account of ever-widening sphere of governmental activity, this department of public finance has come to receive due attention on the part of the economists.

5. Causes of Increase in Public Expenditure. Let us study the various factors which have contributed to this astounding increase in public expenditure during the present century.

(i) *Increase in Area and Population.* In the first place, the increase in public expenditure is due to the fact that the physical boundaries of the States have been widened 'No-man's lands' have been brought under organised Government. Also, if area has not increased, the population figures have considerably gone up. The Governments have, therefore, to cater to the needs of millions of more people scattered perhaps over a much wider area. The increase in public expenditure, in these circumstances, is inevitable. It is said that the Government business obeys the Law of Diminishing Returns or Increasing Cost per person served. The larger the number of persons served, the greater is the cost *per capita*.

(ii) *The Higher Price Level.* Another reason which accounts for the mounting public expenditure is the higher price level. Persons who have seen 'good old days' in India or have heard about them tell us that there was a time when ghee was selling at 4 seers per rupee, whereas now it sells at Rs. 5½ per seer. There has been a similar rise in prices of other commodities. The Governments, like individuals, therefore, have to find larger amount of money to pay for the commodities and the services they have to purchase. Public expenditure must go up.

(iii) *Increase in National Wealth and the Higher Standard of Living.* There has been almost a continuous improvement in agriculture, trade and industry in every country, though in some countries like India it has been painfully slow. There has been a steady increase in the *per capita* income and consequently an improvement in the standard of living. There has also been a corresponding improvement in public revenues and public expenditure. Rich people, rich State.

(ii) *War and Prevention of War.* We know it to our cost now how costly a modern war is. England was spending £15 million daily in this war. The ingenuity of the scientists is being exercised to the utmost to devise the speedier and more powerful weapons of destruction which also happen to be more costly. One atomic bomb costs a huge amount of money. All nations are now feverishly carrying on research in atomic energy. Even when the war is not on, large amounts are spent in preparing for it and adopting means to prevent it. The possibility of a third war is being mentioned and it must be vastly more costly. War has been one of the main factors responsible for increasing public expenditure.

(v) *Incidence of Democracy.* In a democratic State there are several political parties and each party is anxious to enlist the support of the people. The supporters clamour constantly for concessions and benefits, at the expense of public funds. From every corner of the country and from every section comes the call for more and more amenities—more education, more medical aid, more roads and so on. Ministers are asked by the people to open colleges in their home districts. The Governments have thus been pressed by the democratic forces to take upon themselves more and more functions. The Government functions have, therefore, increased both intensively and extensively. The old functions are being performed more thoroughly and many new functions are being undertaken. "Expenditure depends on policy," remarked Disraeli in 1862. In a similar vein, Lowe says: "Finance is the hand-maid of public policy." The public policy in modern times is to extend the sphere of Government activity.

Wagner has propounded a Law of Increasing State Activity. In the case of many services the public agency is considered more efficient and dependable and inspires greater confidence than private agency. Governments have come to provide more and more of what are called indivisible benefits, schemes of public health, education, effective maintenance of law and order, public libraries, museums, art galleries, public parks, etc. All this is bound to increase public expenditure.

(vi) *Defective Financial and Civil Administration.* Not a small increase in public expenditure is due to defective financial and civil administration. Duplication and unnecessary multiplication of governmental agencies is not uncommon. Wrong allocation of resources and functions also leads to extravagance. A lax control over public expenditure swells it to an unnecessary figure.

The above are the chief factors which account for the fact of constantly mounting up of the public expenditure.

6. Canons of Public Expenditure. Just as there are well known canons of taxation, similarly it is possible to formulate some canons or principles to which a prudent Government expenditure should conform.

(i) *The Canon of Benefit.* It is absolutely necessary that all public expenditure must satisfy one fundamental test, viz., of Maximum Social Advantage. Every rupee spent by the Government must have as its aim the promoting of the maximum advantage of the society as a whole. Care has to be taken that public funds are not utilised for the benefit of a particular group or section of society. It should not discriminate as between different sections of the community. The aim is the *General welfare*. The Government exists for the benefit of the governed and the justification of the Government expenditure is, therefore, to be sought in the benefit of the community as a whole.

(ii) *The Canon of Economy.* Although the aim of public expenditure is to maximise the social benefit, yet it does not exonerate the Government from exercising utmost economy in its expenditure. Economy does not mean niggardliness. It only means that extravagance and waste of all types should be avoided. Public expenditure has great potentiality for public good but it may also prove injurious and wasteful. In the words of Coleridge, "The sun may draw up the moisture from the river, the morass, and the ocean to be given back in genial showers to the garden, the pasture and the cornfield; but it may likewise force away the moisture from the fields of tillage, to drop it on the stagnant pool, the saturated swamp, or the unprofitable sand waste."¹ Thus if revenue collected from the tax-payer is heedlessly spent, it would be obviously uneconomical. Economy does not merely imply that scrutiny and control are to be exercised on the expenditure side only. Utmost care has also to be taken to develop the revenues of the State. For if the departmental receipts are increased, the department may be given a smaller grant. This will mean economy in expenditure.

To satisfy the canon of economy it will be necessary to avoid all duplication of expenditure and overlapping of authorities. Also, public expenditure is not intended to replace private expenditure, otherwise it will be transgressing the bounds of economy. Further, public expenditure should not adversely affect saving; it should not compel the people also to spend more or impair their capacity to save. In case Government activity damaged the individual's will or power to save, it would be repugnant to the canon of economy.

(iii) *The Canon of Sanction.* Another important principle of public expenditure is that before it is actually incurred, it should be sanctioned by a competent authority. Unauthorised spending is bound

1. Macgregor—Public Aspects of Finance, 1939, p. 67.

to lead to extravagance and over-spending. Financial procedure in every country lays down that an amount must be sanctioned before it is spent. It also means that the amount must be spent on that particular purpose for which it was sanctioned. The amount is sanctioned not in the name of a particular official or department but for a particular purpose and it can be spent for no other purpose. The same applies to loans. The Provincial Governments in India had no independent powers of borrowing in the days of pre-Montford Reforms. The sanction may be accorded in the annual budget which is passed by the legislature of the country or a sanction may have to be obtained from the immediate officer. But sanction is invariably necessary. This ensures automatic scrutiny and supervision over all items of public expenditure. Allied to the canon of sanction, there is another, viz., auditing. Not only is a previous sanction of public expenditure essential but a post-mortem examination is equally imperative. All the public accounts at the end of year should be properly audited to see that the amounts have not been mis-spent or misappropriated and that the various authorities have not exceeded their powers.

(iv) *The Canon of Surplus.* It remains a sound system of public finance, as of private finance, that an attempt must be made to balance the budget and to make both ends meet. It is not necessary to realise big surpluses from year to year. That will not be good budgeting either. But what is wanted is to avoid ever-recurring deficits. A country whose budgets show a state of chronic deficits will find that its credit in the money market is gone. It will experience difficulties in raising loans and may have to offer exorbitant rates of interest. It is considered a sign of financial weakness. If a country is to maintain its financial credit and stability unimpaired, it must keep its budgets properly balanced. A series of deficit budgets are bound to shake public confidence and seriously impair its borrowing capacity in the eyes of other nations.

(v) *The Canon of Elasticity.* Another sane principle of public expenditure is that it should be fairly elastic. It should be possible for public authorities to vary the expenditure according to the need of circumstances. A rigid level of expenditure may prove a source of trouble and embarrassment in bad times. Alteration in the upward direction is not difficult. It is easy, rather tempting, to increase the scale of expenditure. But elasticity is needed most in the downward direction. It is not so easy to cut down expenditure. When the economy axe is applied, it is a very painful process. Retrenchment of widespread character creates serious social discontent. It is very necessary, therefore, that when scale of public expenditure has to be increased, it should be increased gradually. A short spell of prosperity should not involve public authorities in long-term commitments. Public authorities should not saddle themselves with permanent obligations of a character that they may not be able to meet. Perfect elasticity is out of the question. But a fair degree of elasticity is essential if financial breakdown is to be avoided at the time of shrinking revenue.

(vi) *No Adverse Influence on Production or Distribution.* It is also necessary to see that public expenditure should exercise a healthy influence both on Production and Distribution of wealth in the community. It should stimulate productive activity so that the volume of production in the country increases and it may be possible to raise the standard of living. But this object of raising of the standard of living of the masses will be served only if wealth is fairly or evenly distributed. If the newly created wealth goes to enrich the already rich, the purpose is not served. Public expenditure should aim at toning down the inequalities of wealth distribution. We shall study presently the effects of public expenditure on production and distribution of wealth.

7. **Public Expenditure in India.**¹ Public expenditure in India follows the usual financial procedure. The budgets are carefully prepared and formally passed. All expenses have to be sanctioned before they can be incurred. The accounts are also properly audited. There is the Public Accounts Committee of the Indian Legislature which makes sure that the amounts are faithfully spent in accordance with the appropriations. The financial credit of India also stands very high as Indian budgets are normally balanced budgets and India has never defaulted in its obligations. There are also few glaring instances of extravagance. We may dispute the propriety of certain expenditure but the amounts sanctioned are carefully spent. We may, therefore, say that financial organisation in India is well-laid and the necessary formalities are meticulously gone through.

But we cannot give an all-round good oit to our public authorities in the matter of public expenditure. The canon* of economy is infringed inasmuch as the poorest country in the world maintains the costliest civil service. Our *per capita* income is Rs. 65 but we vie with others and excel them in paying high salaries to our officials. Japan whose *per capita* income is at least twice as high, pays equivalent to Rs. 662 per month to the Prime Minister; President of the U.S.A. gets equivalent of Rs. 17,062; British Prime Minister Rs. 11,000 nearly. But the Governor-General of India receives Rs. 21,000 nearly.

Our defence expenditure even a few years before the war (1939-45) broke out was the highest in the world. Normally the defence services in India absorb 25% of our total revenue. The Indian Statutory Commission pointed out that India's defence expenditure was between two to three times as great as that of the whole of the rest of the British Empire outside Great Britain.

The net result of high military expenditure and top heavy administration is that the bulk of our revenues are consumed merely in running the Governmental machinery and not much is left for beneficent activities. It has been estimated that only 12% is spent on nation-building departments and 88% in running the Government.

1. See our Indian Economics, 1945, p. 562.

e.g., education.

(iii) Partial return, *e.g.*, educational fees.

(iv) Full return, *e.g.*, public utility services and commercial enterprises.

VI. *Dalton's Classification* of public expenditure is—*grants* and *purchase price*. In case of grants, the Government gets no tangible return, *e.g.*, old-age pensions, poor relief, etc. In case of purchase price there is a direct *quid pro quo*, *e.g.*, salaries paid to Government servants.

VII. Adams gives a functional classification of public expenditure as follows :—

(i) *Protective Expenditure*, *e.g.*, on army, police, etc.

(ii) *Commercial Expenditure* incurred in facilitating, encouraging, regulating and controlling business or in direct commercial enterprises by the State.

(iii) *Developmental Expenditure*, *e.g.*, on education, housing, public health, public works, collection of statistics, etc.

VIII. *Transfer or non-transfer Expenditure*. This classification is of recent importance. 'Transfer' expenditure merely transfers the purchasing power or redistributes the tax proceeds, *e.g.*, payments of interest on public loans, old-age pensions, unemployment benefits, etc.

The 'non-transfer' expenditure does not merely redistribute the purchasing power. It is consumption expenditure. Pigou calls it exhaustive or real expenditure. The examples of such expenditure are civil administration, defence and payments to the foreign bond holder. In all these cases the Government appropriates to itself a part of the community's resources, for they are actually used up by the Government. This does not happen in the case of transfer expenditure which does not in any way touch the community's resources.

IX. *Primary and Secondary*. This is quite a popular classification and logical too. Under the primary expenditure we shall place Defence, Law and Order, Civil Administration, Debt Services, etc. The secondary expenditure will include that on social services and developmental functions.

9. **Effects of Public Expenditure on Production.** An idea prevails in some minds that public expenditure makes no contribution to national production. It is a negation of it. It is believed that money spent on public expenditure is a *subtraction* from the national income which is a source of all productive power in the community. This is an erroneous belief. The fallacy lies in this that it is believed that money taken away by the Government for public expenditure just vanishes from the community, whereas that is not so. The money is there, only instead of being spent by the owners of it, it is spent by the Government and if it is wisely spent

it has immense potentialities to increase the productive power of the community as we shall see presently.

But there is another type of public expenditure which some people say is certainly unproductive and they feel themselves on surer grounds. This expenditure is on the war or the preparedness of war—money spent on armed forces, military equipment and armaments. The soldiers and the sailors are withdrawn from productive employment. The materials like coal, oil, rubber, etc., which should have been employed productively are just destroyed in war. There is thus a semblance of truth in the belief that war is destructive rather than productive.

This belief, however, is not entirely correct. Military expenditure, if not over-done, does indirectly assist production by securing to the community an ordered economic life. Actually it is over-done and a great deal of military expenditure may be regarded as unproductive. Also, we have to admit that a short and successful war may bring to the nation much economic gain, by securing some economic privileges. In the same manner by preventing an invasion of the country, the armed forces may enable the community to avoid an economic loss. Thus the military expenditure may be considered indirectly or broadly productive.

Most of the public expenditure is productive directly or indirectly. The Governments, in every country, are running commercial enterprises which are directly productive. The Indian Government has created solid and lucrative assets in the form of canals and railways. The State industries make a direct contribution to production in the community. In the same manner schemes of reclamation and reforestation are also directly productive.

A great deal of public expenditure is, however, only indirectly productive. In this connection we may consider the effects of public expenditure on

- (a) Power to work and save ;
- (b) Will to work and save ; and
- (c) Diversion of resources as between employments and localities.

As for (a) i.e., *power to work and save*, it may be pointed that much of the socially desirable public expenditure incurred by modern Government undoubtedly increases the community's productive power and consequently, also the power to save. Such expenditure includes provision of means of communication and transport, education, public health, scientific and industrial research, controlling of human, animal and plant diseases and expenditure on social insurance, like health insurance, unemployment insurance and old-age pensions.

As for the *will to work and save* much depends on the character of public expenditure and the policy governing it. By giving the people expectation of future benefits from public expenditure, it may

blunt the edge of the desire to work and save. The granting of old-age pensions, insurance against sickness and unemployment and provision of education at State expense must make the people indifferent towards the future and make them neglect saving. This is bound to affect adversely exertions in the present. People will work less. But if such expenditure is kept within proper limits and if it helps the really helpless, the check to work and saving may be mitigated.

Regarding the *diversion of resources as between employments and localities* the public expenditure may have distinctly a beneficial effect on production. Through the system of bounties and subsidies the Government may succeed in diverting resources to hitherto neglected channels and thus create new industries. In the same manner by spending money on the development of backward areas Government may add to the total production in the country. A wisely conducted policy of public borrowing stimulates saving and the habits of investment in the community which is certainly beneficial to production. It also diverts resources into channels which may add considerably to the wealth of the community.

We may thus safely conclude that public expenditure exerts a very wholesome influence on production. It assists production indirectly by adding to the power to work and save, and by a healthy diversion of resources. This is besides taking up directly the work of production through State enterprises.

We must, however, give a warning that public expenditure too is subject to the Law of Diminishing Returns. If it is carried beyond certain limits, it may add little or nothing to the productive power of community or the social benefits desired.

10. Effects of Public Expenditure on Distribution. Public expenditure has a very wholesome influence on the distribution of wealth in the community. It can even out the steep inequalities of incomes. It is an admitted fact that the benefit to the poor from State organisation is greater than to the rich. A rich man can protect himself. He can arrange for his own education and medical relief. But a poor man is helpless. It is, therefore, the poor man who benefits most from the State activity. To this extent the State expenditure seeks to bridge the gulf between the rich and poor.

There is a certain expenditure which benefits the poor exclusively and primarily, e.g., poor relief, old-age pensions and unemployment and sickness benefits. The benefits derived from such social services rendered by the State for the benefit of the poor may be regarded as a net addition to their income. And when we remember the revenue is obtained by taxing the rich, the conclusion is inescapable that inequalities of wealth distribution have been reduced to some extent.

But much depends, here again, on the character of public expenditure and the policy underlying it. Just as there are proportional, progressive and regressive taxes, in the same manner the Government

grants may also be proportional, progressive and regressive. If public expenditure is really to make the distribution of wealth more even and fair, it must be progressive. It must be according to 'ability to receive' (corresponding to 'ability to pay' in taxation). Corresponding to the principle of minimum sacrifice in taxation, there is the principle of maximum benefit in public expenditure. Public expenditure must be so arranged as to confer a maximum benefit on the community as a whole. This is the guiding principle. Judged in this light we can see that expenditure on debt services is regressive because it gives more income to the already rich. Granting of old-age pensions and benefits of social insurance are progressive. If the Government subsidises the production of commodities largely consumed by the poor, is it progressive otherwise regressive.

We have also to consider the reaction of public expenditure on individual income. If a Government grant reduces the desire to work and save, it may lead to reduction of incomes of the beneficiaries. In this case the inequalities of wealth distribution are not reduced.

On the whole, public expenditure in modern times tends to make the distribution of wealth in the community more equitable.

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CHAPTER XXXV

PUBLIC FINANCE—(Contd.)

PUBLIC REVENUE

1. Introduction. In the last chapter we discussed the principles of public expenditure. We have seen that public expenditure has enormously increased in recent times, among other reasons, because the functions of Government have increased both intensively and extensively. For the performance of these functions Government must have an adequate income.

Has the State needs of its own? No, the State has no needs which it can call its own apart from those of the individuals. The modern political scientist has long discarded the Hegelian conception of the State which regarded State as possessing a personality distinct from the personalities of the citizens forming it. The state is composed of individuals and the State exists only for fulfilling the common purposes of the individuals. It exists for them and it is to their needs that State must administer. If, therefore, State needs funds, it is for the performance of the functions or for rendering the services which its citizens need.

Let us, therefore, proceed to study the sources of public income and the principles on which a good tax systems rests.

2. Classification of Public Revenue. Different classifications of public revenue have been offered from time to time. Adam Smith divided public revenue into two parts (i) derived from the property of the sovereign and (2) from incomes or properties of the people. This classification is obviously out-of-date, for a complete separation has been effected between the sovereign and the State. The sovereign has to be content with a moderate Civil List. He may have purely personal income which does not come into the coffers of the State. A modern State derives the bulk of its income from taxation.

Adams classifies public revenues as follows :—

(i) *Direct Revenue.* Government's own income, i.e., from public domains, public industries, gratuities, gifts, confiscation and indemnities.

(ii) *Derivative Revenue.* This is income derived from the people's incomes. This revenue is derived from taxes, fees, assessment, fines, penalties.

(iii) *Anticipatory Revenue.* This consists in taking into account the future income. It consists of loans and the proceeds of treasury bills.

But it should be remembered that income from loans is not generally considered a part of public revenue. As commonly understood

the public revenue consists of State income from State domain, industries, etc., and taxes.

Seligman's classification of public revenue is:

(i) Gratuitous, e.g., gifts.

(ii) Contractual :—derived from State property and industries.

(iii) Compulsory, e.g., taxes, fees, assessments, etc.

There is still another classification popular on the continent, viz.,

Ordinary Revenues and Extraordinary Revenues or, what is the same thing, *Regular and Irregular Revenues*.

In the first category we shall put revenue from State property, State industries and taxes of all kinds; and to the second group will belong income from loans, fines, indemnities, gifts, etc.

A classification which has received much attention in recent times is as follows:—

(i) *Tax Revenue* : i.e., revenue derived from various forms of taxes, taxes on income, taxes on property, taxes on production, consumption, sales tax, etc.

(ii) *Non-tax Revenue* : derived from State property and State industries, fees, contributions, special assessments, tributes, loans, etc.

The most important source of public revenue in modern times is taxation. In India nearly two-thirds of the ordinary revenue is derived from taxation and a little over 30% from Government undertakings.¹

We must remember that attempts at classification have purely academic interest with little or no practical value. In India, the sources of revenue are classified as Central including income-tax, customs, central excise duties, opium, salt, posts and telegraphs, railways and corporation tax; Provincial including land revenue, forests, registration, stamps, excise and a portion of income-tax; and Local including octroi duties, taxes on vehicles, trades, professions, water rate, house-tax etc., for Municipalities and provincial rates and grants for District Boards.

3. Different Sources of Public Revenue Distinguished. We have seen that the most important source of public revenue is taxation. But taxation revenue takes several forms. It consists of taxes, fees, price, special assessments, rates, etc. Let us distinguish between all these.

Tax. Plehn defines taxes thus :—"Taxes are general compulsory contributions of wealth levied upon persons, natural or corporate, to defray the expenses incurred in conferring a common benefit upon the residents of the State."² This definition brings out

1. Findlay Shirras, *Science of Public Finance* 1936, p. 201.

2. Plehn—*Introduction to Public Finance*, 1921, p. 59.

the true nature of a tax. The essence of a tax is (a) that it is a compulsory levy under certain conditions, and (b) it is meant for the general purposes of the State. The individual cannot expect that the State should render him a specific service in return for the tax paid by him. If I pay income tax, I cannot claim in return that the State should post a policeman at my gate during night to protect my property which is a source of income to me. This does not mean that State undertakes to do nothing for the taxes that it receives from the people. The State carries on the general administration and confers a lot of benefit on the community. But these are *common* benefits meant for all and not any *special* benefit meant for the particular tax-payer. There is no direct *quid pro quo*. The taxes are intended to meet the general expenses of the Government which are meant to confer a common benefit without any reference at all to special benefits.

In the words of Taussig, "The essence of a tax as distinguished from other charges by Government is the absence of any direct *quid pro quo*, between the tax-payer and the public authority."

Fee. It is also a compulsory payment made by those who obtain a definite service in return. The fee is intended to cover a part generally of the cost of the service rendered. It is never more than the cost of service. Also, some public purpose is prominent in the service rendered. The obvious example is of the educational fees. In the words of Plehn, "A fee may be defined as a compulsory contribution of wealth made by a person, natural or corporate, under the authority of public power to defray a part or all of the expenses involved in some action of the Government which while creating a common benefit also confers a special benefit, or one that is arbitrarily so regarded." In short, a fee is charged for a special service which is rendered primarily in public interest. A licence fee, however, is much more than the cost of service and there is not much of a positive service in return.

Price. Prices are also paid for special services rendered by the State. But the difference between a fee and a price is this that in a fee a public interest is prominent, whereas price is a payment of a service of business character, *e.g.*; charges for travelling on State railways. You can escape the price by not purchasing a service. Price also differs from a tax. A tax is paid for a common benefit, whereas both fee and prices are for special benefits. When public authority sells a commodity or renders a service, the charge made on the consumer, who avails of the service or buys a commodity, is called a price.

Special Assessment as defined by Professor Seligman is "a compulsory contribution levied in proportion to the special benefit derived to defray the cost of a specific improvement to property undertaken in the public interest. Suppose the Government builds a road or makes suitable drainage arrangements, all the property in

the neighbourhood will appreciate in value. The State has a right to appropriate a part of this unearned increment. The tax imposed for the purpose is called a special assessment. These assessments are intended to cover a part of the extraordinary expenditure incurred by the public authority in this connection. They are levied on property proportionately to the benefit conferred. Seligman analyses the essence of a special assessment thus :—(a) There is the element of special purpose ; (b) The special benefit is measurable ; (c) These assessments are not progressive but proportional to the benefit received ; (d) They are for specific local improvements ; and (e) They provide for the capital account to increase, as it were, the permanent plant of the community. Unlike a fee there is an element of coercion in special assessment.

Rates. They are levied by local bodies, Municipalities and District Boards for local purposes. They are generally levied on immovable property of the residents but not necessarily for any special improvements effected or special benefits conferred. The rates generally vary from locality to locality.

4. Classification of Taxes. Taxes have been variously classified and some classifications are given below :—

I. Taxes may be proportional, progressive, regressive and degressive.

Proportional Tax. A proportional tax is one in which, whatever the size of income, same rate or same percentage is charged. If all the tax-payers have to pay 1% of their income as tax or pay 5 pies in the rupee, then it is a case of proportional taxation.

Progressive Tax. If, on the other hand, the rate of the tax rises as the taxable income increases, the tax will be called a progressive tax. The principle of a progressive tax is 'higher the income, higher the rate.' In the case of Indian income-tax, of the taxable income nothing is charged on the first Rs. 1,500, on the next Rs. 3,500 the rate is 9 ps. in the rupee and the next Rs. 5,000, it is one anna and 3 ps. in the rupee and so on. This is a progressive tax.

It is worth noting that even under a proportional tax the rich man pays more. For example if the rate is 1% on the monthly salary, a man who is getting Rs. 200 p.m. pays Rs. 24 per year and the man who is getting Rs. 500 p.m. will pay Rs. 60 per year. Thus the man with the higher income pays more even under the proportional taxation. But under progressive taxation he will pay much more, because as income increases, the rate of tax must also increase. The man with Rs. 500 monthly salary may have to pay 2% instead of 1%. He will pay, therefore, Rs. 120 instead of Rs. 60 per year. Every country has adopted progressive system of taxation, as it is considered more equitable. This is due to the fact that the sacrifice entailed in proportional taxation is less than it ought to be. We shall consider the pros and cons of progressive taxation in a subsequent section.

Regressive Tax. A tax is said to be regressive when its burden falls more heavily on the poor than on the rich. It is opposite of a progressive tax. No civilised Government imposes a tax in which, as income increases the rate of tax is lowered. That would be palpably unjust. But there are several taxes on commodities whose burden rests mainly on the poor. The Indian salt tax is regarded as a regressive tax, as it presses more heavily on the poor than the rich. As a matter of fact the rich man does not feel it at all.

Degressive Tax. The tax is called degressive when the higher incomes do not make a due sacrifice or when the burden imposed on them is relatively less. This will happen when a tax is only widely progressive, i.e., when the rate of progression is not sufficiently steep. A tax may be progressive up to a limit beyond which the same rate is charged. In that case there may be lower relative sacrifice on the larger incomes than on smaller incomes.

II. Taxes may be classified as *Direct Taxes* or *Indirect Taxes*. In the case of a direct tax, the man who pays it is also intended to bear it. But an indirect tax is expected to be shifted to other persons. If I pay income-tax I have to bear it; I cannot pass it on to anybody else. It is a *Direct Tax*. But if a tax is imposed on sugar, the dealer, who first pays it, charges it from the next purchaser till ultimately it is borne by the consumer of sugar? The tax has been shifted. It is called an *Indirect Tax*.

We shall discuss the merits and demerits of direct and indirect taxes in the next chapter.

III. *A tax on Capital and a tax on income.* If a tax is levied according to the capital value of the property it is called a tax on capital but if it is levied according to its annual value, i.e., the income it yields annually, it is called a tax on income. This distinction is, however, quite different from the distinction between taxes *paid out of income* and those *out of capital*. The inheritance tax is a tax on capital but it may be paid out of income and not out of capital, i.e., by selling a part of the property.

IV. *Taxes on property and taxes on commodities.* The test of the distinction lies in durability. Land is durable, hence a property. Cloth is not durable, therefore a tax on cloth is a tax on commodity. On property the tax is imposed periodically but a commodity is taxed once for all.

V. *Specific and 'ad valorem' taxes.* Specific is according to weight of the commodity. *Ad valorem* is according to its value. If imposed on coarser or cheaper articles, the specific duties mean a heavier burden and are considered regressive in character. But they are simple to administer. For the administration of *ad valorem* duties elaborate administrative machinery is needed. The invoice has to be checked and a host of appraisers are needed for evaluating the goods.

VI. *Taxes on persons and taxes on things.* A poll tax or an income-tax is a tax on a person. But sugar excise duty is a tax on a

commodity. But the distinction is erroneous, for all taxes are paid by persons and not by things. The sugar tax is paid by the consumers of sugar.

We wish to add that all this discussion about classification is arid and serves no practical purpose.

5. Canons or Principles of Taxation. Adam Smith's contribution to this part of economic theory is still regarded as classic. His statement of the canons of taxation has hardly been surpassed in clarity and simplicity. Modern writers on Public Finance have not either succeeded in improving on them materially or displacing them. They still constitute the foundation of all discussions on the principles of taxation. We give below Adam Smith's four celebrated canons of taxation.

1. *The Canon of Equality.* "The subjects of every State ought to contribute towards the support of the Government, as nearly as possible in proportion to their respective abilities, that is, in proportion to the revenue which they respectively enjoy under the protection of the State."

This canon embodies the principle of equity or justice. This is the most important canon of taxation. It lays the moral foundation of the tax system. The canon of equality does not mean that every tax-payer should pay the same sum. That would be manifestly unjust. Nor does it mean that they should pay at the same rate which means proportional taxation, for a proportional tax is also not a very just tax. What this canon really means is the equality of sacrifice. The amount of the tax paid is to be in proportion to the respective abilities of the tax-payer. This clearly points to progressive taxation. Adam Smith makes it clear in a subsequent portion of his book 'Wealth of Nations'. He says: "It is not very unreasonable that the rich should contribute to the public expense not only in proportion to their revenue but something more than that proportion." Only then the tax will be in proportion to the ability to pay.

2. *The Canon of Certainty.* "The tax which each individual is bound to pay ought to be certain, and not arbitrary. The time of payment, the manner of payment, the quantity to be paid ought all to be clear and plain to the contributor and to every other person. Where it is otherwise, every person subject to the tax is put more or less in the power of the tax-gatherer, who can either aggravate the tax upon any obnoxious contributor, or extort, by the terror of such aggravation, some present or prerequisite to himself."

Uncertainty in taxation, according to Adam Smith, encourages insolence or corruption. He regards this canon as very important, for in his view "very considerable degree of inequality.....is not near so great an evil as a very small degree of uncertainty." Hadley also regards it as the most fundamental canon, for, according to him, all attempts at equality will prove illusory without the taxes being

certain. The canon of certainty demands that there should be no element of arbitrariness in a tax. It is not to be left to the caprice or the sweet will of the income-tax department. The tax-payer should be able to see for himself why he is called upon to pay a particular sum. That is why a wide publicity is given to the budget proposals and discussions thereon. The passing of the budget is a guarantee of certainty.

An old tax is no tax, is a maxim of taxation which issues out of this canon of certainty. An old tax is well-known, its reactions are certain and the people are supposed to have made the necessary adjustments. The tax is not felt. It causes the least disturbance in the economic arrangements of the tax-payer. There is little inconvenience from an old tax.

Certainty is needed not only from the point of view of the tax-payer but also from that of the State. The Government should be able to estimate roughly the proceeds of the various taxes proposed to be levied and the time they are expected to flow in. Only then the Government can follow its financial programme.

3. *The Canon of Convenience*. "Every tax ought to be levied at the time or in the manner in which it is most likely to be convenient for the contributor to pay it."

The canon of certainty says that the time and the manner of payment should be certain. But the canon of convenience says that the time of payment and the manner of payment should be convenient. If a tax on land or house is collected at a time when rent is expected to be paid it satisfies the canon of convenience. If the tax can be paid by cheque, the manner is convenient but not so if it is to be paid personally to the taxing authority. In the latter case there will be lot of inconvenience and harassment. Taxes on consumers are very convenient. The consumer pays them when he buys things little by little and at a time when he can afford to pay. It is especially so in case of a luxury. The purchaser chooses his own time for purchasing it. The manner is also very convenient for he has to make no special arrangement for paying a tax. He pays it when he buys the commodity. The tax is wrapped up in the price of the commodity. The Indian land revenue conforms to the canon of convenience, because it is paid in instalments and it is to be paid after the harvest time. Income-tax, on the other hand, infringes the canon of convenience. The assesse has to take his account books to the income-tax office and satisfy the income-tax officer. This necessitates a series of personal interviews with a consequent loss of time. It also involves a lot of vexation, trouble and oppression. The canon of convenience is justified on the grounds of good administration and production.

4. *The Canon of Economy*. "Every tax ought to be so contrived as both to take out and to keep out of the pockets of the people as little as possible, over and above what it brings into the public treasury of the State."

One implication of the canon of economy is very obvious. The tax will be economical if the cost of collecting it is very small. If, on the other hand, the salaries of the officers engaged in collecting the tax take away a big portion of the tax revenue, the tax is certainly uneconomical. As far as possible, as much should come into State treasury as is taken out of people's pockets. Nothing should evaporate in the way. If there is corruption or oppression involved in the frequent visits to the income-tax office and the odious examination by the taxing officer, the canon of economy is not satisfied.

But the tax should be economical in another, perhaps broader, sense. It would infringe the canon of economy if it retards the development of trade and industry in any manner. If incomes are subjected to a very heavy tax, saving may be discouraged, capital will not accumulate and the productive capacity of the community will be seriously impaired. This would be obviously uneconomical. In order to be economical a tax must not obstruct in any manner the ultimate prosperity of the country. It is in conformity with the canon of economy that the Central Government's budget for 1946-47 grants an allowance for expenditure on scientific research and buildings erected and machinery installed. They are bound to add to the productive activity of the nation in due course.

Taxes on harmful drugs and intoxicants are regarded as economical, because they not only bring income to the State, but also discourage unproductive expenditure. But taxes on raw materials are uneconomical, because they raise the price of the manufactured article and weaken the competitive power of the industry. Also, every middle-man goes on adding something to the tax that he has paid.

The first canon of Adam Smith is ethical and the other three are administrative in character.

OTHER CANONS OF TAXATION

Since Adam Smith wrote, the science of Public Finance has continued to make progress. Subsequent writers have added canons of their own to these four well known canons. The following are some of the canons which have been recently added.

5. *Fiscal Adequacy or productiveness.* The State must live on the revenue raised from the people by means of taxes. The Government should be free from financial embarrassments. It will be necessary, therefore, that the tax proceeds should be adequate for the purpose and the Government does not run into a deficit. But the Government should not err on the side of excess. In their zeal to raise more revenue they should not cripple in any manner the productive capacity of the community or impair the economic resources of the community.

The canon of productivity would indicate that one tax bringing a large income is better than many, each bringing a very small revenue. Too great a multiplicity of taxes is to be avoided because each

tax is likely to cause some vexation to the citizens. But here again we must warn that the principle of concentration should not be carried to excess, otherwise it may become either uneconomical or inequitable.

6. *Elasticity.* The canon of elasticity is closely connected with that of fiscal adequacy. As the State needs increase, the State revenue should also increase, otherwise they will not be adequate. To meet an emergency or a period of strain the Government should be in a position to augment its financial resources. Some of the taxes should be capable of yielding more if need be. Income-tax is a very good example of an elastic tax. By raising the rate a bit or by levying a surcharge, the yield can be considerably increased. When the war broke out, the first financial measure was a surcharge on income-tax. Railway and postal rates also are fairly elastic.

7. *Flexibility.* The canon of flexibility looks like that of elasticity but the difference between the two is quite clear. Flexibility means that there should be no rigidity and that the tax system can be quickly adjusted. Elasticity means that the revenues can be increased. Unless the system is flexible, the revenue cannot be increased, for alteration will not be possible. Thus presence of flexibility is a condition of elasticity. If a tax system cannot be altered without bringing about a revolution, it lacks flexibility. Permanent Settlement of Bengal (1793) is an example of rigidity or lack of flexibility in a tax. Under this arrangement the Government bound itself to collect the same sum from the landowners in perpetuity. This lack of flexibility is, in so small measure, the cause of financial troubles of Bengal.

8. *Simplicity.* In the words of Armitage Smith, "A system of taxation should be simple, plain and intelligible to the common understanding." This canon is essential if corruption or oppression is to be avoided. If a tax is complicated so that the tax-payer cannot understand how much he is to pay and why he is to pay it, a great power will pass into the hands of the tax-gatherer. The door will be widely opened to corruption and oppression.

9. *Diversity.* Another important principle is that of diversity. A single tax or only a few taxes will not do. There should be a variety in taxation, and a larger number of them so that all the citizens who can afford to contribute to the state revenue should be made to contribute. They should be approached in a variety of ways. There should be a wise admixture of direct and indirect taxes. In this manner the canons of fiscal adequacy and equity may be better satisfied. But too great a multiplicity will be bad and uneconomical.

There are several other considerations put forward. It is recommended that a tax should fall on revenue and not on capital. It should not cut down the minimum subsistence of the tax-payer.

It must be said that in no country does each tax satisfy each of

these canons. It is not possible to make each and every tax conform to all these principles. We have to look to the tax system as a whole rather than to each individual tax. Some taxes are bound to infringe some canons. But the tax system as a whole should satisfy most of these principles of taxation.

6. Characteristics of a Good Tax System. A good tax system should be composed of taxes which conform to the canons of taxation discussed above. The tax system as a whole should be equitable. Its burden should fall on the broadest shoulder. It should also be economical so that the work of collection is as cheaply done as possible. It should not hamper the development of trade and industry. It should, on the other hand, assist the economic development of the country. The Government should be certain of its revenue. The tax system should be based on a comprehensive and up-to-date statistical information so that accurate forecasting is made possible. The tax system should not be a mere leap in the dark. Its effects should be calculable with a reasonable precision. The taxes as a whole should be convenient, i.e., felt as little as possible. An ingenious formula has been suggested that 'the rich should pay more taxation than they think, while the poor should think they pay more than they do. This double illusion, it is argued, will keep the rich contented and the poor virtuous.' This formula is, however, hardly practical.

The tax system should be simple, financially adequate and elastic so that it can respond to the new needs. It should not be rigid like our land revenue which is fixed for 30 or 40 years. The adoption of the sliding scale system of land revenue recently in the Punjab makes up for this defect to some extent.

The ideal of simplicity may lead us to advocate a single tax. But the single tax will expose the tax system to other serious objections. It is, therefore, agreed that the tax system should be as much broad-based as possible. There should be diversity in the tax system. But we do not want too great a multiplicity. We don't agree, therefore, with Arthur Young when he says, "If I were to define a good system of taxation, it should be that of bearing lightly on an infinite number of points, heavily on none."

Further, the tax system should be efficient from administrative point of view. It should be simple to administer. There should be little scope for evasion or accumulation of arrears. It should be fool proof and knave proof. Chances of corruption should be minimised.

Another important characteristic of a good tax system is that it should be a harmonious whole. It should be truly a system and not a mere collection of isolated taxes. Every tax should fit in properly in the system as a whole so that it is a part of a connected system. Each tax should occupy a definite and due place in the financial structure. They should not pull in different directions. For example imposition of a protective duty and a countervailing excise duty do not go well together.

7. The Indian Tax System. Administratively the Indian tax system is fairly efficient. There is little smuggling and not many leakages. Evasion is not common. The cost of collection is not disproportionately high. It is fairly simple. There is hardly any doubt on the ground of fiscal adequacy or sufficiency. The tax system is quite productive. It is also fairly broad-based. Even the poorest in the country pays, *e.g.*, salt tax. The system is fairly diversified. The Indian tax system is also not particularly inconvenient as compared with the tax systems of other countries. The land revenue is paid in instalments and paid after the harvest. The taxes on commodities occupy an important place. On the grounds of flexibility or elasticity we have no cause of complaint. Our tax system has stood the strain of the costliest war fought so far in a magnificent manner.

But we cannot say that ours is an ideal tax system. Duties have been imposed in India without any regard for the needs of Indian trade and industry. The customs duties were levied exclusively for revenue purposes. The tariff schedule *not infrequently* hampered the development of Indian industries. Meagre depreciation allowances were granted so that the industry felt a real difficulty in the renewal or replacement of plants. We have already mentioned that the budget for 1946-47 makes up for this defect to some extent. Our tax system, therefore, has not fully satisfied the canon of economy.

The biggest breach is in the canon of equity.¹ The Indian tax system discriminates against the poor and in favour of the rich. Income-tax is the only tax which is paid by the rich and even here progression is not as steep as it ought to be. Land Revenue, Salt Customs, Excise and even railway fares are in the aggregate contributed more by the poor than by the rich. Absence of Succession Duty and a tax on agricultural incomes accentuate the regressive character of our tax system. In the words of Prof. K. T. Shah, "Richer classes escape relatively with much lower burden, even though their ability to bear or evade such burden is much greater, while the poor classes, who cannot escape from such burdens, have to bear the lion's share of the burden with less than lamb's capacity to shoulder them." The Indian income-tax does not make allowance for the number of dependants and is, therefore, not in accordance with ability to pay.

There is an element of uncertainty. Monsoons are a disturbing factor. The Indian budget has been called a gamble in the Monsoons.

There are several other defects in the Indian tax system. It is haphazard and has not been scientifically planned. It has been moulded by the exigencies of time, the main concern being to balance the budget. Little attention has been paid to incidence of taxes and their effect on production and distribution. Here it has not been

1. See our Indian Economics, 1945, p. 561.

truly a system. Sir Walter Layton calls the Indian budgets 'tightfit' with little provision for unexpected and unforeseen expenditure.

Legislative control over finance is strictly limited, about 80% of the budget being non-votable. It thus lacks democratic sanction.

The tax system is also very conservative. Salt tax, excise revenue, and land revenue in the existing form, continue even though they have been universally condemned.

Unlike other advanced countries, the direct taxes in India play a secondary role, although the system has been improved in this respect on account of the financial measures adopted in the war (1939-45). In 1938-39 the proportion of taxes on income to total revenue was 22·6% but it was 62·3% in 1945-46.

Till recently our tax system did not distinguish between earned and unearned incomes and thus treated the actual worker and the idle rich alike. In 1945-46, 10% earned relief came to be granted.

Allocation between Central, Provincial and Local Finance is also defective. Income-tax being a direct tax should be wholly Provincial and many Provincial taxes like entertainment tax and sales tax should belong to the local bodies. A part of the land revenue should also go to the local boards.

We cannot say, therefore, that the Indian tax system is perfectly satisfactory. There is much room for improvement.

8. The Problem of Justice in Taxation. We have discussed the various canons of taxation and the most important of these canons seems to be the canon of equality or equity. The most fundamental problem in taxation is the problem of justice. Everybody expects the minister of finance so to arrange his taxation proposals as to ensure that the burden of taxation falls on those who can fully bear it. "It is equitable that people in the same economic position should be treated in the same way for purposes of taxation." But how to measure economic positions?

In order to achieve the ideal of justice in taxation several theories have been put forward from time to time. We examine some of these theories below :--

1. '*The Cost of Service Principle.*' However equitable it may appear to be, 'the cost of service principle' cannot be applied in actual practice. The cost of services of the armed forces, police, etc., the services which are rendered out of tax proceeds, cannot be exactly determined. We have to calculate how much it costs to render a service to the particular tax-payer. We know that in case of taxes there is no direct *quid pro quo* to the tax-payer. Hence the question of the ascertainment of the cost of service to an individual tax-payer does not arise. Only in those cases where the services are rendered out of prices, e.g., supply of electricity, railway or postal service, a near approach can be made to charging according to the cost of service. Even here the exact cost cannot be ascertained and for fixing the charges we have to fall back on the principle 'charging what the

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service will bear.' The cost of service principle, therefore, must be rejected as being impracticable.

2. *Benefit or 'Quid Pro Quo' Theory.* On grounds similar to those mentioned above the benefit theory also breaks down when an attempt is made to give it a practical shape. Most of the public expenditure is incurred for common or indivisible benefits. It is impossible to calculate how much benefit accrues to a particular individual. There are few cases only where the benefit to the individual is ascertainable, e.g., old-age pensions. Applied to this case, the theory would demand a refund of the pension itself. None would seriously put forward such a proposal. It is, therefore, impossible to ask the people to contribute according to the benefits received by them. Several other objections can be advanced against the Benefit Theory. It is against the basic principle of the tax. A tax is paid for the general purposes of the State and not in return for a *specific* service. The Benefit Theory can have meaning only if we think of the benefit to the community as a whole. But this is obviously useless for the purpose of taxing the individual. If you want to make some exceptions, you will be in a difficulty. On what basis will you make the exceptions?

Moreover, it is commonly believed that the poor benefit more from the State organisation than the rich. If that is so, then to apply the Benefit Theory would mean making those people pay who can afford to pay the least and letting off those who can and who should. This would be absurd.

In the words of Plehn, "The common benefits are the peaceful enjoyment of life, liberty and property." So far as life and liberty are concerned the benefit of State protection is the same for all. This would indicate a uniform tax, say a poll tax. But poll tax has been long discarded on account of relatively small yield and greater cost and friction of collection. If we take protection of property as the basis then it should be a proportional tax, proportionate to the capital value or the income-yielding capacity of the property. But proportional taxation has also been rejected in modern times as being less than just. We cannot, therefore, take benefit as a criterion of justice.

The Benefit Theory has, however, a place in all modern tax systems. The idea of benefit stands out prominently in the case of fees, licences, special assessments and local rating.

3. *'Ability to pay' or Faculty Theory.* The most popular and plausible theory of justice is that every tax-payer should be made to contribute according to his ability or faculty to pay. It is to be based on his taxable capacity. Nothing would appear to be more just. But the accepting of the principle does not mean the end of our difficulties; rather the difficulties begin. The question which then faces us is what is the measure of a man's ability to pay? In the search for a proper criterion of a person's faculty to contribute to State expenditure we can proceed on two lines, subjective and

objective. If we examine the position of the tax-payer in its subjective aspect we shall consider the inconvenience, the pinch or the sacrifice involved. On this point three distinct views have been advanced (a) the Principle of Equal Sacrifice. (b) The Principle of Proportional Sacrifice. (c) the Principle of Minimum Sacrifice.

In the words of J. S. Mill, "Equality of taxation, as a maxim of politics, means *equality of sacrifice*. It means the apportioning the contribution of each person towards the expenses of Government, so that he shall feel neither more nor less inconvenience from his share of the payment than every other person experiences from his".¹ According to this principle the money burden of taxation is to be so distributed as to impose *equal real* burden on the individual tax-payers. This would mean proportional taxation:

According to the principle of *proportional sacrifice* the real burden on the individual tax-payers is to be not equal but proportional either to their income or the economic welfare they derive. This would be more just than if the sacrifice involved were equal. Those who can make a greater sacrifice should be asked to do so. This would mean progressive taxation.

The *minimum sacrifice principle* considers the body of tax-payers in the aggregate and not individually. According to this principle the total real burden on the community should be as small as possible. In the words of Edgeworth, the chief exponent of the theory of minimum aggregate sacrifice, "The minimum sacrifice.....is the sovereign principle of taxation." This principle would involve a high level of minimum exemption and a very steep progression as incomes increase. The less the aggregate sacrifice, the better the distribution of the tax burden in the community. The State exists to maximise human welfare. This it will be able to do by minimising the sacrifices involved.

The sacrifice principles have only an academic interest. This hair-splitting has little practical value. Sacrifice is something subjective, it is internal to the tax-payer and we have no means of measuring it. A great sacrifice does not always mean a great injury. A tax on wine means a great inconvenience to the consumer of wine but a small real injury to him. Sacrifice as a test of ability must be abandoned.

We must, therefore, take our second line of approach to measure a man's faculty to pay, that is, proceed objectively. Here we are on surer grounds. But here again, we find that several criteria have been mentioned. A man's faculty to pay may be measured according to (a) consumption; (b) property; or (c) income. Consumption is not a sound criterion, because consumption or utilisation of the services of the State by the poor is considered to be out of all proportion to their means and as such it cannot be taken as a practical principle of taxation. Property also cannot be a fair basis of taxation, for a property of the same size and description may not

1. Mill, J. S.—Principles of Political Economy. Book V, II 2.

yield the same income; and some persons having no property to show may have large incomes, whereas men of property may be getting small incomes. To tax according to property will not be taxation according to ability. Income, however, remains the single best test of a man's ability to pay. But even in the case of income, the tax will be in proportion to faculty if there is a minimum exemption to allow for a reasonable subsistence, if there is an allowance made for the number of dependants and finally if the principle of progression is applied by taxing the rich at a higher rate.

Besides, we have to consider 'the ability to pay' not merely of the individual tax-payer but of the community as a whole. In this light it is necessary that the tax system as a whole is not oppressive, that it does not discourage saving or retard accumulation of capital and that it does not in any manner impair the productive capacity of the community by hampering the development of trade and industry in the country. This is the solution of problem of justice in taxation. The ends of justice are not served by applying the cost of service principle or by taxing according to benefit, but according to faculty or ability to pay. The ability to pay cannot be judged subjectively by the amount of sacrifice involved, but objectively according to the man's income and not according to his consumption or property. Each proposal to achieve justice leads to some sort of progression in taxation. What is intended is that tax system as a whole should be equitable. Each individual tax may not be absolutely just or equitable. But the iniquity of one tax should be neutralised by the equity of another. "There may be iniquity in the parts but equity in the whole."

Equity is a matter of opinion. Some time, some people happen to think that a certain tax is equitable. There is no generally accepted definition of equity. It is in the words of Dalton, "an elusive mistress, whom perhaps it is only worth the while of philosophers to pursue ardently and of politicians to watch warily."

9. Some Other Theories of Taxation. We propose here to make only a passing reference to some other theories or principles of taxation put forward by some writers on Public Finance.

'Leave-as-you-found-them' principle. According to this principle the existing distribution of wealth is not to be disturbed. The inequalities of wealth distribution are to be neither increased nor decreased. The advocates of this principle want to adopt a non-committal attitude on the question of the existing distribution of wealth. This principle states that "taxes should be so imposed that when all have paid them, each will be left in the same position relative to his fellows, as he was before the payment." This principle is not accepted in modern times. The State must reduce inequalities of wealth distribution and not leave them as they are.

The Political or Ethical Principle. This refers to equality, equity or justice in taxation, a theory which we have discussed above. If the circumstances and economic condition of the tax-payers were

the same, to achieve justice would have been a simple affair. But in view of the varying circumstances of individual tax-payers the attempt at justice must cause some headache to the minister of finance. Several ways have been suggested which we have already examined.

The Financial Principle. This is summed up in the cynical suggestion of Colbert, "Pluck the goose with as little squealing as possible." The only guide for the tax-gatherer, according to this principle, is the maximum of revenue with the minimum of protest. No consideration of justice is to enter his mind. He is to follow the line of least resistance and the finance ministers do follow this line actually, although they will not admit it. This is shown by the fact that they are more inclined towards indirect taxation than direct taxation. According to this view productivity and expediency are more important than equity.

Socialistic or Compensatory Theory. According to the advocates of this theory of taxation, it is the function of the State to equalise the distribution of wealth in the community. It can be done by taxing the more rich more, the aim is to bridge the gulf between the poor and the rich. If this aim is to be completely achieved it would necessitate taxing the rich to such an extent as may discourage saving and drive capital abroad, which would no doubt cripple the productive power of the community. The inequalities of wealth distribution can be reduced not merely by taxation but also by wise public expenditure.

'Every one ought to pay something.' The idea is to make every citizen feel a sense of responsibility in State matters so that he may take more active and intelligent interest in the civic affairs. It will make the citizens conscious of their position and importance in the State. But for the poor it will be too dearly bought. It will be more equitable if the poor are exempt from the tax burdens altogether.

Taxation should make net satisfactions equal. This means that we should consider the entire legal system and not merely tax laws. All laws, not merely tax laws, affect the people and affect their economic welfare. Net satisfactions of the individuals, after considering the entire body of laws, must be made equal. This principle seems to be better than principle of equality of sacrifice.

Taxation for Regulating Consumption. According to this theory the primary aim of taxation is to regulate the consumption of the harmful commodities like intoxicants. This is obviously a one-sided view.

10. Proportional vs. Progressive Taxation. In our discussion of the various theories of a fair distribution of tax burden, we have almost invariably been led to the conclusion that there must be some degree of progression wherever possible in a tax, because only then it can be called equitable. The principle of progression has been accepted everywhere now. But it was not always so.

There have been advocates of proportional taxation. McCulloch's well-known remark is typical of the attitude of the nineteenth century. He said: "When you abandon the plain principle (of proportion) you are at sea without rudder and compass and there is no amount of injustice you may not commit." J. S. Mill was even more emphatic. He said: "A graduated income-tax was an entirely unjust mode of taxation, and in fact, a graduated robbery." According to him progressive taxation was a step towards confiscation.

If we assume that the relation between income and economic welfare is the same for all tax-payers then the only justification for a proportional tax is, according to the principle of equality of sacrifice, on the assumption that as income increases marginal utility of the income diminishes very slowly, and, according to proportional sacrifice principle, the marginal utility does not at all decrease. These assumptions, at least the latter, have been questioned. Money income alone cannot be taken as a guide. We must take into consideration other relevant circumstances of the tax-payer while fixing the amount of the tax. Proportional taxation will entail equal sacrifice, whereas sacrifice itself should be proportional to the tax-payer's capacity. Proportional taxation is, therefore, not equitable. It is also not sufficiently productive and the element of arbitrariness even in proportional taxation is not altogether absent. The theory of proportional taxation has, therefore, been abandoned definitely so far as direct taxation is concerned. In other words, wherever possible, the principle of progressive taxation has been applied.

The principle of progressive taxation is based on certain assumptions. It is assumed that the same income means the same utility to different individuals. This is a very weak assumption. It is also assumed that as income increases, the utility of each addition to the income decreases. It is further assumed that as income increases the expenditure on luxuries tends to increase, whereas necessities are more important than luxuries from the point of view of economic welfare. It follows, therefore, that by taxing the rich more, we compel them to cut down luxuries, which does not mean so much sacrifice as the benefit to the poor for whom the tax proceeds may be spent.

Progressive taxation yields much greater revenue and hence it is more productive. It is very difficult to see how modern Governments would have balanced their budgets today in the absence of the principle of progression.

Progressive taxation is more economical. The cost of collection of the taxes does not increase when the rate increases. About the equity of progressive taxation there can be no question. It calls forth a proportional sacrifice from the tax-payers. It places the heaviest loads on the broadest backs.

The principle of progression gives to the tax system much needed quality of elasticity or flexibility. Just a little raising of the rates is needed when an emergency arises.

The opponents of the progressive principle have raised several objections against the system. We examine below some of these objections :—

(i) It is said that it is all arbitrary. The degree of progression is settled by the finance minister on no definite and scientific basis. It is purely his personal opinion. The tax proposals are bound to be coloured by his own whims. Clearly the objection is not to the principle but the degree of progression. Although it cannot be scientifically fixed yet for practical purposes small differences do not matter. The members of the legislature are there to set right the angularities of the Chancellor of the Exchequer.

(ii) It is pointed out that the principle of progression cannot be advocated on the ground of promoting welfare, because welfare is subjective and cannot be measured. There is no scientific apparatus to test that welfare has increased consequent on reduction of inequalities of incomes. The rich are perhaps vexed more than the comforting of the poor.

We may concede the strength of the objection. We cannot measure the increase in welfare. But few can deny that it is socially desirable that the rich should contribute more, for they can do so.

(iii) Progression will discourage saving, drive out capital and thus hamper trade and industry. It will, in short, be uneconomical.

But such dire consequences will follow only if progression exceeds limits of reason and expediency. This has seldom been done. Capital is not so sensitive as it is supposed.

(iv) Progression breaks on scientific grounds. Its fundamental assumption that the same income measures the same satisfaction is not at all valid. Further, the Law of Diminishing Utility may not hold good in case of money. "Money", they say, "does not represent one good, but goods in general, and since human wants in general are unlimited, it may be questioned whether the wealthy person does require the additional pounds less and less. It may even be that his desire for additional income increases as his income increases. Such may be the case where an increase in income caused the possessor to move into a higher social circle, and so brought about an extension in his necessary wants."¹

On scientific grounds the argument is unanswerable but progression can be advocated equally strongly on ethical and political grounds.

(v) It is said that progression will lead to evasion. But the possibility of evasion in proportional taxation is also present. It all depends on the social conscience.

Thus progressive taxation is ethically sound, socially desirable and also conforms to canons of economy, productivity and elasticity, whether it can be scientifically justified or not.

1. Thomas, S. E.—Elements of Economics, 1936, p. 332.

11. Concept of Taxable Capacity. The concept of taxable capacity has racked the brains of not a few economists and publicists. Dalton calls it "a dim and confused conception." He says: "Absolute taxable capacity is a myth and should be banished from all serious discussions on Public Finance." To the question whether taxable capacity can be measured he thinks Cannan's 'No how' is the best answer. Findlay Shirras, on the other hand, thinks that it is of great practical importance. "It is always wise and useful," he says, "for a Government to know even roughly the limit that the country can contribute by way of taxation both in the ordinary and extraordinary circumstances." He goes on: "The necessity in post-war finance especially of balancing budgets heavily laden with public debt of short maturity has made the question of absolute taxable capacity a real and an abiding problem of taxation."¹

What is taxable capacity? The term taxable capacity can be used in two senses (i) in the absolute sense and (ii) in the relative sense. The absolute taxable capacity has been variously defined. It means how much a particular community can pay in the form of taxes without producing unpleasant effects. Relative taxable capacity, on the other hand, means the respective contribution which the two communities should make towards a common expenditure, e.g., Provincial contributions to Central expenditure. Dalton says the former is a myth and the latter a reality. The relative limit may be reached without reaching the absolute limit. That is, we may have reached the limit of how much a particular community should contribute without reaching the limit beyond which it possibly cannot contribute.

There are two extreme views about absolute taxable capacity, (a) the capacity to pay without suffering, and (b) the capacity to pay regardless of suffering. In the former sense taxable capacity is practically nil, for every tax must entail some suffering. In the latter case there is practically no limit to taxable capacity except the one imposed by the extent of the resources of the community.

Sir Josiah Stamp defines taxable capacity as "the margin of total production over total consumption, or the amount required to maintain the population at subsistence level." This means the utmost that a community can pay "without having a really unhappy and downtrodden existence and without dislocating the organisation too much." Findlay Shirras defines absolute taxable capacity as "the maximum amount which the citizens of a country can contribute towards the expenses of the public authorities, without having to undergo an unbearable strain. Briefly, taxable capacity is the limit of squeezability.... It is the taxability of a nation the maximum amount of taxation that can be raised and spent to produce the maximum economic welfare in that community."

These definitions lack scientific precision and have an element of vagueness. Stamp's level of subsistence, and "unhappy downtrodden existence" and Shirras's "unbearable strain and maximum

1. Findlay Shirras—*Science of Public Finance*, 1936, p. 227.

economic welfare" cannot be scientifically defined and laid down in exact terms. But this does not detract from the practical importance and the utility of the concept of taxable capacity. The meaning conveyed by the definitions given above is fairly clear, although we must admit that any attempt to measure precisely the taxable capacity is doomed to failure. Cannan's 'no how' is really the correct answer.

When is the limit of taxable capacity exceeded? Views also differ as to what are the symptoms to show that taxable capacity has been exceeded. Stamp mentions two limits to taxable capacity (a) the check to total production, and (b) the check to total revenue yield. But the check may be due to causes other than excessive taxation. Tax is not the only factor that affects production. Ellinger¹ thinks that "the limits would be reached when so much is taken out of the tax-payers' pockets that the incentive to produce is reduced, and when insufficient remains to provide the necessary capital to make up for wastage and to set to work new workers in an increasing population." He obviously ignores the beneficent effect of public expenditure on production. The fact is that the taxable capacity is not rigidly fixed. It is a moving point. It is relative to so many factors any change in which is bound to change our idea about the taxable capacity of a nation.

Factors on which taxable capacity depends. Findlay Shirras gives the following factors which determine the taxable capacity of a nation :²

(1) *The Number of Inhabitants.* It is quite obvious that the larger the number the greater is the taxable capacity of the community to contribute towards the expenses of the Government. From this point of view India is well placed. Its taxable capacity will infinitely increase when the proper economic development of the country is brought about.

(2) *The Distribution of Wealth in the Country.* If wealth is more equally distributed, the taxable capacity will be correspondingly less. But if there are large accumulations of wealth in fewer hands, the Government can raise more money by taxing the rich.

(3) *The Method of Taxation.* A scientifically constructed tax system with a wise admixture of various types of taxes, direct and indirect, is sure to bring a larger yield. Our tax system is not so much diversified : we have no taxes on large agricultural incomes and none on inheritance. This certainly reduces the taxable capacity.

(4) *The Purpose of Taxation.* If the purpose of taxation is to promote welfare of the people, they will be more willing to tax themselves. For a popular cause, the people will be willing to stretch their capacity to the utmost. If the Government proceeds to raise money for fighting famine, disease or spread of education, there will

1. Quoted by Dalton—*Principles of Public Finance*, 1943, p. 136.
2. Findlay Shirras—*Science of Public Finance*, 1936, p. 234.

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be a surprising expansion in the yield of taxes. But if the bulk of public funds is to be spent on the maintenance of foreign armed forces and for the upkeep of a costly civil service in which foreign element is quite prominent, as is the case in India, the taxable capacity must correspondingly shrink.

(5) *The Psychology of the Tax-payers.* Much depends on the people's attitude towards a Government. A popular Government can galvanise the spirit of the people and prepare them for the greatest sacrifice. An appeal to patriotism is often the cause of a success of a financial measure. This is what makes war loans successful. Psychology of the people is an important factor and unless they are approached properly, they may be unwilling to tax themselves.

(6) *Stability of Income.* If the income of the citizens is precarious there will be not much scope for further taxation. The vagaries of the monsoons in India account for a lower taxable capacity. It is only on stable incomes that long-term financial arrangements can be based.

(7) *Inflation.* It lowers the purchasing power of the people and it cripples many; it has got an adverse effect on taxable capacity.

All these factors must be taken into account before you can have an idea about the taxable capacity of a nation. It may be that on account of multiplicity of factors influencing taxable capacity, you cannot measure at all this capacity. But this does not mean that the attempt is useless. The interest lies in the journey itself rather than the destination. In the words of Shirras: "A road leading to an important centre has often many crossings, signposts, danger signals, but this does not lessen its value to the cautious sojourner."

12. Dream of a Single Tax. Attracted by its simplicity, many writers have advocated the imposition of only one tax. It has a long history behind it.¹ It has also been advocated in different forms.

The Physicrats like Quesney and Turgot advocated a single tax on land. According to them land was the only source of wealth. It only yielded a net return (*produit net*). They advocated a single tax (*impôt unique*) on this net return.

Henry George of San Francisco advocated a single tax on unearned increment in land values. He was socialistically inclined and he believed the monopolisation of land by a few was the cause of the poverty of the masses. Rent, according to him, was an unearned increment and he advocated the appropriation of entire rent by the State through taxation. He said that no other tax would then be necessary.

His thesis has not been accepted and his proposal is objected on

1. Findlay Shirras—Science of Public Finance, 1936, p. 31.

several grounds :—

(a) That the tax revenue will not be sufficient to meet the large expenditure of a modern Government.

(b) That it would penalise the holders of one type of property leaving the others scot-free. Not only is it unfair but it will also lead to evasion as the landlords would try to acquire some other property instead. It would not fairly distribute the tax burden.

(c) It is not easy to calculate how much is exactly unearned and how much of the increment is due to the foresight, personal effort or improvements by the land-owners.

(d) Compensation will have to be paid by the State in cases where the land values went down. The Government would become unnecessarily involved in fluctuations of land values.

(e) There will be several administrative difficulties.

The modern socialist advocates a single tax on income. Every income should be taxed. It is said that it can be made to steer clear of the two major difficulties facing a single tax on land. By taxing all incomes and higher incomes sufficiently steeply adequate funds can be raised. Also, through devices like graduation and differentiation, the tax burden can be fairly distributed. But even this proposal is not free from objections.

(a) It will be vexatious, as everybody will be put to inconvenience.

(b) The cost of collection of tax from numerous small incomes will be almost prohibitive. This can be overcome by administrative improvements.

(c) When there is only one tax to rely upon evasion will be a much more serious matter. Attempts to stop the loopholes will make the tax system even more vexatious.

(d) There will be administrative difficulties.

(e) The inheritors of wealth, very fit cases of taxation, will escape if only incomes have to be taxed. This can be overcome by treating inheritance as taxable income.

(f) It will check saving and hence accumulation of capital. This would retard the development of trade and industry. This objection can be met by exempting savings. But this would mean taxing not the personal income but personal expenditure. But this again would present administrative difficulties and leave large loopholes.

The single tax on income, too, on the whole, is beyond practical finance.

Another variety of a single tax is on the capital value of the property. But we have already said that taxation of income is a better index of a man's ability to pay than the amount of property that a man holds.

Besides objections advanced against particular forms of a single tax, two arguments of a general nature applicable to all forms of single tax can be advanced :—

(a) It is bound to create anomalies as between persons which can be rectified by a multiple tax system.

(b) Evasion is much easier in case of a single tax whereas there are counter-checks in a multiple system.

Single tax was a dream of theorists. It has few advocates among practical statesmen. The discussion has a purely academic interest for a single tax is definitely beyond the sphere of practical finance. Every country has adopted a mixed or multiple system of taxation.

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CHAPTER LXVI

INCIDENCE OF TAXATION

1. What is Incidence? The problem of the incidence of taxation is the problem of who pays it. Taxes are not always borne by the people who pay them in the first instance. They are sometimes shifted on to other people. The incidence means the final resting place of the tax. The incidence is on the man who ultimately bears the money burden of the tax. We had to see out of whose pocket the money payment of the tax has come or in whose pocket the money would have remained had the tax not been imposed.

We may distinguish between *impact* and *incidence*. The impact of the tax is on the person who pays it in the first instance and incidence is on one who finally bears it. If an excise duty is imposed on sugar, it is paid in the first instance by the sugar manufacturer, the impact is on him. But the duty will be added to the price of the sugar sold, which through a series of transfers will ultimately fall on the consumer of sugar. The incidence is, therefore, on the final consumer.

Incidence is not shifting.—Shifting means the process of transfer, i.e., the passing of the tax from the one who first pays it to the one who finally bears it. It is through this process of shifting that the incidence of a tax comes finally to rest somewhere. The process of shifting may be slow or may be partially effective so that the burden of a tax may not fall entirely on the person who is intended to bear it. Shifting is also known as *repercussion*. The tax may be shifted forward from the producer to the consumer or backward from the latter to the former.

Shifting is quite different from evasion. Evasion is to avoid the tax payment. I may give up the consumption of a taxed commodity and evade the tax. This evasion is quite legal. But there is also illegal or fraudulent evasion, e.g., when I submit a false return of my income or conceal my real income. In evasion there is no question of shifting the tax to somebody else.

The term incidence should also be distinguished from the effects of taxation. The effect of a tax refers to incidental results of tax. There are several consequences of the imposition of a tax which are quite distinct from the problem of incidence or who really pays. The imposition of an excise duty on sugar, we have seen, is shifted ultimately to the consumer of sugar. The incidence is on the consumer. It is a simple question and a narrow one. But the effects of this duty may be far-reaching; a heavy excise duty may cripple the industry. The manufacturers' profits will be reduced. Labour and capital may have to leave the industry. Wages may be reduced. Thousands of middlemen engaged in the distribution of sugar may

find their earnings reduced. Reshuffling of their family budgets may affect the demand for certain other goods. The consumption of sugar may decrease and that of substitutes may increase. These are all effects of the tax, a much wider problem as distinguished from the incidence which is a narrow and special problem of finding who bears the money burden of the tax.

We may also distinguish between the money burden of the tax and the real burden of a tax. The money burden of a tax is represented by the total amount of money received by the treasury. If a consumer has to spend Rs. 5 more per month on the sugar consumed by him on account of the levy of a duty on sugar, it is the money burden that he has to bear. But he may have reduced the consumption of sugar which may mean a reduction of his economic welfare. He may have to pinch in the consumption of other commodities. This pinching, inconvenience, sacrifice or, in short, loss of economic welfare is the real burden of the tax. In incidence we are concerned with the money burden and not the real burden. We may also add that the question of incidence is really a question of price. The burden of the tax is shifted by the raising of the price of the commodity or the service that the tax-payer supplies. It is through the price that the other people are touched. If the price is not affected others will not be affected. Therefore the question of incidence really comes to this. How is the price affected by the tax? It is thus a part of the wider problem of value. But it is not so simple to trace the relation between the price and the tax, for price is affected by many factors and the tax is only one of such factors.

2. Importance of the Study of Incidence. We have seen that the theorists on Public Finance have rejected in modern times what is called the financial principle of taxation. It is not merely aimed at raising a certain amount of revenue, but the aim is to raise it from those sections of the people who can best bear the tax. The aim, in short, is to secure a just distribution of the tax burden. This obviously cannot be done unless an effort is made to trace the incidence of each tax levied by the State; we must know who pays it ultimately to know whether it is just to ask him to pay it or whether the burden imposed on him is according to the ability of the tax-payer.

If the tax system is to conform to Adam Smith's first canon of taxation, *viz*, the canon of equality, it becomes imperative for us to make a careful study of the reactions and repercussions of each tax and find out its final resting place. Unless we know who really pays the tax we cannot say that the tax is equitable or that it is borne by the people who can afford to bear its burden.

There are certain taxes called the direct taxes which are borne by the people who pay them first. The incidence in such cases is apparent. But the taxes system of a country is not merely composed of direct taxes alone. There are also the indirect taxes whose reactions are a complicated affair. These taxes are intended to be shifted,

But in actual practice, on account of economic friction, the shifting may not take place at all or it may be partial or it may be shifted on to quite a different class of people from those intended to bear. The shifting process has to be left to the free working of the economic forces. A rough and ready calculation must be made by the finance department as to the probable course that shifting will take and as to who will ultimately bear the tax.

In a modern democracy, where the Government is run by a particular political party the Government is pledged to a particular programme. It wants to serve a certain class of people and tax a certain class of people. The late Sir Chhotu Ram, the Development Minister of the Punjab Government, used to declare openly that he wanted to raise a certain amount of revenue exclusively from the urban trading classes. It is clear that the Government cannot carry out such a policy without visualising the final resting place of the tax.

If Public Finance is to serve as an instrument of social justice, the question of incidence at once assumes a great importance. The rich have to be taxed and the proceeds have to be spent for the benefit of the poor. If you have to tax the rich, the incidence must be on the rich otherwise the object is not served. We must, therefore, follow each tax and make sure that it finds a rich home to rest in.

3. Direct and Indirect Taxes. We have said before that the question of incidence is very simple in case of a direct tax, when the impact and the incidence are on the same person. But in the case of an indirect tax the impact of the tax is on one and the incidence is on the other. A direct tax is not intended to be shifted, whereas an indirect tax is intended to be shifted. The question of incidence, therefore, really arises in case of indirect taxes. Before we trace the incidence of individual taxes we would like to make the distinction between direct and indirect taxes a little more clear and study their relative merits and demerits.

Taxes on commodities are generally called indirect taxes for they are shifted completely or partially on to the consumers, whereas they are first collected from the dealers or producers. But we should remember that the mere fact that it is a commodity tax does not make it an indirect tax. Before it can be called an indirect tax, its burden must be shifted. It is very possible that the commodity may be taxed, yet its price may remain unaffected. In this case the consumer is not touched and the tax will be direct and not indirect. A lump sum tax imposed on a monopolist or as a percentage of monopoly net revenue is not shifted, whereas a monopoly tax in proportion to the output tends to be shifted. In the former case it will be a direct tax whereas in the latter case it will be indirect. The inheritance tax is commonly considered a direct tax. It falls on the successor and it tends to stay there. But the predecessor, while he was alive, may have taken an insurance policy to cover the amount of the tax. In this case it imposes an indirect money burden on him.

Income-tax, again, is a direct tax but in exceptional cases a part of it may be shifted. To that extent it will become an indirect tax. We may thus conclude by saying that we cannot draw hard lines between taxes which are direct and those which are indirect. The distinction between the two types is settled by the question whether the tax can be shifted or not. If it is shifted, it is indirect otherwise direct.

4. Relative Merits and Demerits of Direct and Indirect Taxes. We compare these two forms of taxes not with the object of choosing whether we should have the one or the other. No country relies exclusively on one type. Both direct and indirect taxes are needed to make up an equitable and adequate tax system. "I can never think," said Great Scotman, "of direct and indirect taxation except as I should think of two attractive sisters who have been introduced into the gay world of London, each with an ample fortune, both having the same percentage—for the parents of both I believe to be Necessity and Invention—differing only as sisters may differ" ¹ However, direct taxes are better in some respects and indirect in some other respects.

In favour of direct taxes we can say : (a) They are more equitable as progression can be applied to them. The rate of the tax is varied to make the tax conform to the ability to pay.

(b) They are economical as the cost of collection is small, and, there being no intermediary between the tax-payer and the State, no part of the tax evaporates in transit.

(c) Their yield can be calculated with a fair degree of precision. The tax-payer is also certain of the amount that he has to pay.

(d) They have a high degree of elasticity. Income tax in this war very satisfactorily responded to the enormously enhanced needs of the State.

(e) They create a civic consciousness among the tax-payers. A man who pays a direct tax feels that he is contributing towards the State expenditure. He is expected to take keener interest in civic affairs.

On the other hand, direct taxes have some drawbacks too. (a) They are very inconvenient to pay. Every tax-payer feels the pinch. Hence they are not popular. The tax has to be paid in lump sum, the filing of returns is a complicated affair and there is lot of harassment.

(b) They can be easily evaded and the State defrauded of its due. A direct tax is a tax on honesty.

The Merits of Indirect Taxation are as under : (a) It is convenient. The man pays a tax when he buys a commodity and at a time when he can afford it. It is paid in small trickles rather than in lump sum; many people prefer to be taxed in the dark.' The tax-

1. Quoted by Findlay Shirras—Science of Public Finance, 1936, p. 297.

payer does not feel that he is paying it. The tax is wrapped in the price of the commodity he buys.

(b) It is very difficult to evade an indirect tax.

(c) Indirect taxes can also be made more equitable by being imposed on articles generally consumed by the rich. Luxuries are generally taxed at a higher rate.

(d) When imposed on necessities of life or articles for which the demand is inelastic, indirect taxes are also fairly elastic.

(e) They have a beneficial social effect as by means of such taxes the consumption of harmful drugs and intoxicants can be discouraged.

The demerits of indirect taxes are as follows :—(a) They are uncertain. It is not always possible to anticipate the various repercussions of a tax imposed on a commodity. The finance minister cannot precisely calculate the estimated yield of a tax.

(b) They are regressive. Every consumer of the taxed commodity, rich or poor, pays the tax at the same rate. Therefore, the real burden on the poor is greater than on the rich. If the tax is imposed on the necessities of the life, its regressive character is accentuated. According to Engel's Law of Consumption, the bulk of a poor man's income is spent on necessities of life. The poor man pays the tax, therefore, on almost all his income, whereas the rich man pays it on a relatively smaller portion of income spent on necessities of life.

(c) They do not develop any civic consciousness in the taxpayer.

(d) Although the shop-keeper is considered an unpaid tax collector, yet it is thought that the cost of collection of certain indirect taxes is very heavy. In case of customs duties, a highly-paid staff of custom officials, appraisers, raiding parties to prevent smuggling have to be engaged. These taxes are uneconomical in another way. The taxed commodity passes through a number of middlemen and each adds something to the tax, so that the final consumer pays much more than the State receives.

The distinction between direct taxes and indirect taxes is not of much practical importance. We cannot assume that entire burden of direct taxation falls on the rich and that of indirect taxation on the poor. Indirect taxes like taxes on luxuries fall on the rich and not on the poor. It is, however, generally true that indirect taxes like inheritance tax and income and super tax fall exclusively on the rich. In a good tax system we must have a proper balance between direct and indirect taxation. One corrects the other. Indirect taxation relieves exclusive pressure on the rich and makes the system of taxation broad based.

5. The Diffusion or Absorption Theory of Taxation. The advocates of the diffusion theory say that a tax gets automatically

diffused in the community very widely so that each individual taxpayer bears only a small proportion of the tax, a proportion which he can and ought to bear. It is intended to convey that the tax burden is automatically equitably distributed among [the various sections of the community. The conclusion follows that it is useless to bother about incidence and it is impossible in this world of complicated exchanges to trace the shifting of a tax which settles the question of ultimate incidence. In other words, the taxing authority may comfortably rest in the belief that everything is all right with their tax policy. Even if a tax contains an initial element of injustice, adjustments are sure to be made and the iniquity will be either eliminated or not felt at all. Towards the end of the eighteenth century Lord Mansfield said: "I hold it to be true that a tax laid in any place is like a pebble falling into and making circles in a lake, till one circle produces and gives motion to another, and the whole circumference is agitated from the centre."¹ This is how a tax gets diffused or spread throughout the community. The diffusion takes place through the exchanging process. If a tax is imposed on a commodity, little by little it is shifted on to the consumers concealed in the price of the commodity. A tax on profits will enter the cost of the commodity. A tax forms a part of the cost of production of a commodity or of the cost of rendering a service and as such it moves from person to person along with the commodity and comes to rest where it ought to. It does not affect any particular part of the commodity adversely. Canard compares taxation with the operation of cupping. "After taking the blood from the vein," he says, "it is no more bloodless than any of the other veins owing to the circulation of the blood through the body."²

It cannot be denied that some diffusion of taxation does take place. But it is trying to prove too much to say that through this diffusion process the burden of taxation is automatically adjusted according to the tax-payer's faculty to bear the tax. If it had been so sure and automatic, the finance ministers would not have been at pains to work at the probable effects of a tax and find out its ultimate resting place. If the taxes were to be diffused according to some unknown law they would not have tried to devise some taxes for the taxation of some particular class of people. Nobody seriously believes that the taxes are spread throughout the community otherwise how are we to explain the hue and cry raised whenever a tax is imposed. The tax does stick to certain persons. It is not like the cupping operation but like the cutting of a branch of a tree or a limb of the body.

There are certain taxes like the poll tax, inheritance tax or income-tax in which there is no shifting at all. There is not the least diffusion. The theory has only a limited application. It applies to indirect taxes and even in their cases there is no diffusion throughout the community.

1. Quoted by Findlay Shirras—*Science of Public Finance*, 1936, p. 336.

2. *Ibid.*, p. 347.

The diffusion theory assumes free and perfect competition which but rarely exists. There is a good deal of economic friction which obstructs the shifting of a tax.

To sum up the diffusion theory is unsound in principle, contrary to actual experience and belief and that it has got only a limited application. Its only redeeming feature is that it emphasises the fact that the taxes do not stay where they are first imposed. But we cannot rely on a theory like this to distribute the tax burden in the community fairly and completely.

Let us now consider the incidence of some important taxes.

6. Commodity Tax. A tax on a commodity tends to be shifted forward from the producer to the consumer and from the consumer backward to the producer. A tax on production of a commodity tends to raise its price and will, therefore, be normally borne by the consumer. But a tax on consumption is likely to check consumption and tends to be shifted backward to the producer. But to what extent the tax will actually be shifted will depend upon the factors governing demand for and supply of that commodity. If demand is inelastic which is the case with the necessities of life, the people must buy the commodity. The producer will be in a stronger position and the entire burden of the tax will be shifted on to the consumer. But in case of elastic demand the people will buy less. In that case the price will not rise by the full amount of the tax. The tax will, therefore, be borne partly by the buyers and partly by the sellers. How much exactly will depend on the degree of elasticity. In the same manner if the supply is inelastic, as in the case of a perishable commodity, the seller cannot withdraw the supply. His position is weak. The tax will stick to him. In case of an elastic supply he can shift the burden on to the consumers. "As a rule the consumer bears a smaller part of the tax when the demand is more elastic than the supply than he does when the supply is more elastic than the demand."

It is possible that the price may not rise at all. This will happen when the consumers have been able to discover an untaxed supply of the commodity or satisfactory untaxed substitute. In this case the entire burden of the tax falls on the producer or seller.

On the supply side, the laws of return will also exert their influence. The taxing of a commodity tends to check its demand which in its turn will check production. Now if the industry is subject to Law of Increasing Returns, the reduced production will be obtained at a higher cost and in case of the Law of Diminishing Returns at a lower cost. In the former case the price will be higher than in the latter case with a corresponding burden on the consumer.

Much also depends on the amount and the method of taxation. A small tax no body bothers about. No producer would like to annoy his customers for a paltry sum. He would cheerfully bear it himself. Only when it is heavy, the shifting will take place. A tax

on marginal output will raise the price and not one on the surplus output.

The nature of the commodity also will make a difference. A tax on a commodity like sugar gets rapidly adjusted and shifted. But a tax on a house cannot be so readily shifted for rent is fixed for a period and during the currency of the lease nothing can be done.

Other factors which govern the course of shifting of a commodity tax are whether competition is perfect and whether labour and capital are freely mobile. Only in case of free and unfettered competition can the tax be passed on to the consumer otherwise it will stick to the producer. If labour and capital are freely mobile, it will add to the ability of the producer to shift the burden on to the consumer. If, on the other hand, large fixed capital is locked up in the industry, the position of the producer is correspondingly weakened and the probability will be that the tax burden will be borne by him. He cannot withdraw his capital. He must continue in the field even when he is losing for a time.

Thus incidence is a very complicated affair. It is a part of a larger problem of price determination. There are various conflicting influences on price. We say that a tax on commodity *tends* to be borne by the consumer. But this tendency may or may not be actually realised. Unless the price is affected, the consumer is not touched and he is touched only to the extent that price is raised by the imposition of a tax.

7. Tax on Monopoly. We have said that the question of incidence is a part of a larger question of the theory of value. As value determination differs in the case of a monopoly from the value determination under competitive conditions, in the same manner the incidence of a tax on monopoly also works out differently.

The monopoly tax may be (a) independent of the output of the monopolised product or it may vary with the output, i.e., increase or decrease with the output.

When the tax is independent of the quantity it may either be a lump sum tax on the monopolists or a percentage of the monopoly net revenue (profit). In both these cases—the lump sum or percentage on the monopoly net profit—it will fall on the monopolist. He cannot shift it to the consumer. This could be done by raising the price. But he is already supposed to have fixed a price which yielded him the maximum monopoly net revenue. A price higher or lower than this must have meant a less monopoly net profit. If it had been possible for him to raise the price consistent with the policy of maximising his profit, he would have done it already. Any alteration in the price, thus, would be at the expense of his profit. That being the case he must now pay the tax out of his own profit. He will get the greatest profit now after paying the tax by leaving the selling price unchanged and the consumer unaffected.

It is possible that instead of re-calculating how he would maximise his profit after paying the tax he may simply put up the price

shifting the tax to the consumer. But by so doing he may have reduced his monopoly profit. "He may prefer this to a rather greater profit at the expense of a greater effort."

In case, however, he has been charging less out of consideration for consumers' welfare than what he could charge for maximising profit, he will, when the tax is imposed, take in the 'slack' and to this extent the burden of the tax has been shifted to the consumers.

Now let us see what happens when the tax varies directly or inversely with the quantity of the commodity produced. In this case, as discussed in the previous section, elasticities of demand and supply and the influence of the laws of returns will have to be taken into account. The tax will enter the cost of production. It will mean an addition to the cost of each unit produced. Taxing of the commodity, therefore, raises the price which will tend to reduce the demand. If, however, the demand is inelastic, it cannot be appreciably reduced and the tax will be shifted to the consumer. If the demand is elastic, the consumers can make adjustments and buy less of the taxed commodity in which case the tax will partly be borne by the monopolist, for instead of facing a decline in demand he may reduce the price and decide to bear the tax himself. If the supply is more elastic, then the producer is in a stronger position. Thus if the demand is more elastic than the supply, the consumer will bear less burden of the tax; and if supply is more elastic than the demand, then the producer will bear less. If the production of the commodity obeys the Law of Increasing Returns the reduction in production consequent upon the imposition of a tax will raise the price more than if it were subject to the Law of Diminishing Returns. The burden on the consumer in the former case will be greater than in the latter case.

If the amount of the tax increases with the increase of output then the monopolist will be tempted to produce more and keep the price low. The burden of the tax will entirely be on the monopolist who will, in fact, be transferring a part of his monopoly profit to the consumers.

8. Taxes on Imports and Exports. Import duties are generally, and almost exclusively, borne by the home consumer. The duty paid by the importer is added to the price that he charges from the next purchaser and so on. The duty is ultimately shifted to consumer. Only in very rare cases the burden of such duties can be shifted to the foreign producer. If our demand for the imported product is elastic so that we may or may not buy it and the supply is not elastic and the foreign producer has no alternative market, then in such a case the burden can be shifted to the producer. But these conditions are rarely present and the duty must be borne by the home consumer.

Export duty is, similarly borne by the exporter. It goes out of his profits. The price in the world markets is fixed so far as he is concerned. No individual exporter is in a position to influence the world price. But here again we can imagine a situation in which the

exporter is in an exceptionally strong position so that the duty can be shifted to the foreign purchaser. For example we may have a monopoly of the supply of a commodity and the demand of the foreigners for our product is inelastic, whereas so many other alternative markets are open to us. In such circumstances we can certainly make the foreigner pay the export duty by raising the price of the commodity by the amount of the duty. But such conditions are very rare and unless they are present the export duty must be borne by the exporter. Dalton lays down this rule: "Taxes on imports and exports may, then, be regarded as obstacles to exchange and in accordance with the preceding theory, the direct money burden of any such obstacle is divided between the two parties to the exchange in inverse proportion to the elasticities of their respective demands. In other words it is divided in direct proportion to the urgencies of their respective needs, which are satisfied by the exchange."¹

9. Taxation of Land. The value of land depends on two sets of factors: (a) Natural factors like the fertility of the soil, the situation of the land and some other natural conditions; and (b) investment of capital in drainage schemes, anti-erosion measures, irrigation facilities and other measures necessary to increase and sustain productivity. The tax depending on the first set of factors is a tax on economic rent and has a tendency to fall on the owner. He cannot shift it to the tenant for economic rent is determined by factors independent of a land tax. The owner is supposed already to be charging rent fully measuring the superiority of his land over the marginal land. But in case through ignorance, indifference or indulgence he has not been charging full economic rent, he will, when the tax is imposed, sharply look round and take in the 'slack'. To this extent the tax is shifted to the tenant.

The tax of this nature, i.e., the tax on economic rent, cannot be passed on to the consumer for the consumer can only be reached through the price. We know rent does not enter into price. The raising or lowering of the rent does not affect price. The fact that the tax is paid by the occupier makes no difference. If he pays it in the first instance he can deduct it when he pays the rent to the owner.

Tax on economic rent is thus borne by the owner of the land and not by the tenant or the consumer of the product.

But where the owner can vary his investment in land, he will reduce this investment when the tax is imposed. This will affect the yield and hence the price of the commodity. In this case, i.e., in the case of improvements, it is shifted to the consumer.

Tax on building sites also tends to be thrown on the owners of these sites who enjoy surplus income on account of more favourable situation of their sites.

Can the land tax be shifted to a prospective purchaser of the

1. Dalton—Principles of Public Finance, 1943, p. 57.

land? No, the tendency is that it will be borne by the present owner. The purchaser while purchasing land will bear in mind that he will have to pay the tax. He will, consequently, offer less price. The tax is thus capitalised or absorbed, in the lower price that the land will command. This will happen to the extent that future tax payments can be accurately forecast. But there is also a neutralising tendency. Future increases in land values may also be anticipated and more price offered.

10. Tax on Buildings. There are two parties in immediate contact with each other so far as housing is concerned, *viz.*, the owner and the occupier. If the tax is imposed on the owner, he will try to raise the house rent and thus shift it to the occupier or tenant. But he cannot do anything during the currency of the lease. Further there may be a rent law controlling rents and forbidding the landlord from raising the rents. Even if he can raise the rent, the tenant may shift preferring less accommodation to higher rent. In such cases, therefore, the incidence will be on the landlord, at any rate for some time. But the effect will be that building a house for letting it out may not remain a paying proposition. A heavy tax will check building activity and remuneration of the builder and of other people engaged in the trade may fall. The demand for building sites may decrease. If they try to sell off, the new purchaser will bear in mind the tax and offer correspondingly less. But in course of time the supply of houses will fall off and the rents must rise thus shifting the burden, to some extent, to the tenants. Thus the tax may fall partly on the owner, partly on the builder and partly on the occupier.

If, on the other hand, the tax is imposed on the occupier, it will tend to stick to him. It is not easy to find a new house nor so convenient to shift. One likes to stay on where he is. The demand for a house is inelastic. We must have a house. The landlord, therefore, is in a much stronger position. The tax will thus stay where its first impact was. But if the occupier is a shop-keeper, then he may be able to shift the tax to his customers in the neighbourhood especially if they are poor by raising a bit the price of the commodities he sells. The poor customers must buy from the neighbouring shop. We must remember, however, that the development of means of communication and transport brings the travelling salesman at our door and weaken the grip of the neighbouring store.

We may thus conclude that the tax on buildings will fall generally on the occupier but under certain circumstances may be shifted to the owner, the builder or the customer.

11. The Incidence of Rates. Rates are imposed by the local bodies on immovable property in proportion either of the annual value or the capital value of the property. Their incidence is just like incidence of building taxes discussed above. They will be borne by the owners, occupiers or customers (in case the property is used for business purposes) and the respective burden on each will depend on the economic friction and the relative bargaining strength

of parties, or, what comes to the same thing, on the relative elasticities of demand for and supply of the property taxed.

As a general rule the tax on the site value will ultimately be borne by the owner and that on building value, or what may be called the beneficial rate, by the occupier or customer in case of business premises. Much will depend on the willingness or the ability of the occupier to shift to another site. The more he is willing or able to shift, the greater will the tendency of the rate falling on the owner. In the short period, the mode of collection is also important. Wherever its impact is whether on the owner or the occupier, in the short period it will tend to stick there.

12. Taxes on Personal Property. In case there is a general tax on all sorts of personal property it will be a tax on wealth. It will generally be borne by the owners of wealth. But if the tax is very heavy its incidence may be more widely spread. It may discourage saving, check the accumulation of capital or drive it abroad and the whole community will suffer by the diminution of production.

But some particular form of personal property may be selected for taxation, e.g., car, radio set or jewellery. In this case the incidence will be shared according to the relative elasticities of demand and supply. Demand for the articles mentioned above is elastic. The imposition of the tax will check the demand; and if there is a keen competition among the producers, they will have to reduce the price, or what comes to the same thing, offer to pay the tax. The tax in this case is shifted to the producer or the seller.

If the property is being used for business purposes such as doctors' equipment then, a heavy tax will have a tendency to be shifted to the customers, especially if the position of the business man relative to his customers happens to be strong.

13. Death Duty. In almost all advanced countries, death duties form an important part of the tax system. Death duties take two forms: Estate Duty and Succession Duty. The estate duty is levied on the total value of the estate (i.e., movable and immovable property) left by the deceased irrespective of the relationship of the successor. It is graduated with reference to the total value of the property. The succession duty varies with the relationship of the beneficiary to the deceased. It is graduated on the basis of the windfall element which increases with the distance of relationship. Further, it takes into consideration individual shares of the successors and not the total value as in estate duty. In England the death duty is a combination of both estate duty and succession duty. In Germany the duty imposed also takes into consideration the property already held by the beneficiary. Other things being equal the rate of the duty will be higher if the beneficiary already owns a large property. The Estate Duty Bill has also been introduced in the Dominion Parliament in India (1948) and the charging clauses of the Bill generally follow the provisions of the legislation in the United Kingdom.

Where is the incidence of death duties? Is the incidence on the deceased or the beneficiary, i.e., the successor? The owner is dead and it is said that death pays all debts. He can be taxed no more. No further burden can be placed on him. If, however, he insured against such a tax then he certainly bore it when he paid the insurance premia. In the absence of any such anticipation by the owner of the property when he was alive, the tax will obviously fall on the beneficiary because he inherits so much less of the property. He is poor by the tax levied on the property of the deceased.

✓ 14. **Incidence of Taxes on Income.** Income-tax, super tax, excess profits tax are all direct taxes and as such are borne by the people who pay them in the first instance. They cannot ordinarily be shifted. But a business man, who is in exceptionally a strong position relative to the persons he deals with, may be able to shift a part of the tax to his customers. Maybe that he is the seller of a very popular brand, maybe that he is a very popular doctor on whom his patients have implicit faith. In such cases the customers will be willing to pay a bit more. But these conditions are rarely present and the income-tax-payers must rest content with the burden of the tax. In the short run, it is definite that the tax on the business man has no influence on price which is determined by demand and supply. Profit depends on price and not *vice versa*. A tax on profit, therefore, cannot be passed on to the consumer by raising the price. In the long run, however, a heavy tax may check enterprise by reducing the anticipated profits. But it will depend on elasticity of supply and alternative channels of investment available. It is very difficult to say what will happen in the long run. The probability is that a moderate tax will have no undesirable repercussions.

If, however, the income-tax is extremely heavy, it may discourage saving, check accumulation of capital or drive it abroad. The productive capacity of the community will be impaired and there will be widespread repercussions of such a heavy tax. But the tax is seldom so heavy. Ordinarily, therefore, it rests on those on whom it is imposed.

15. **Tax on Interest.** Interest, as a source of income, is generally taxed under income-tax. But a separate tax may be imposed on income from interest. Such a tax will ordinarily be borne by the capitalist especially if the supply of capital is very large and the demand for capital is less. But in case the demand is more urgent and insistent and the supply of capital is meagre, as is the case in rural part of India, the tax on interest will be shifted to the borrower. Much depends on the degree of mobility of capital. If capital can be moved to some other channels of investment, the supply of capital for lending purposes will contract which will lead to the raising of the interest rates. This means the incidence is on the borrower. Actually, however, capital is seldom so mobile and a part of the tax at least will be borne by the owners of capital. In

case the tax is very heavy, it will discourage the accumulation of capital to the detriment of trade and industry in the country. In that case the incidence will be more widely spread among the consuming public.

16. Tax on Profits. The problem of incidence of tax on profits is complicated by the fact that there is difference of opinion among the economists about the definition of profits and the elements that compose it. Some economists, like Professor Walker, regard profits as analogous to rent. In this sense profit is a surplus earned by the entrepreneur who is superior to the marginal entrepreneur. The price in the market is determined by the marginal producer. Hence just as rent does not enter into price, similarly profit also does not enter into price. It cannot, therefore, be shifted to the consumer. It will be borne by the business man who pays it. But we do not subscribe to this theory. Even the marginal entrepreneur must have some profit in the long run. Normal profit is, therefore, not a surplus but a part of the necessary cost. This, however, does not lead us to the conclusion that a tax so profit will be shifted to the consumer unless the entrepreneur is able to influence the price which he rarely can. For an ordinary individual entrepreneur price in the market is fixed. That being so a tax on his profits must come out of his own pocket. A general tax on profits, as a rule, is not shifted, unless the prices are rising rapidly and the consumers are anxious to buy. This, however, is very rare.

But if the tax is a special tax on profits from a particular trade and industry then there will be a tendency for the entrepreneurs to withdraw themselves from such lines. If this happens the incidence will ultimately be shifted to the consumers of the commodity or the users of the service supplied by these entrepreneurs. A great deal depends upon the elasticity of demand and the mobility of capital.

A tax on profits may take the form of a licence duty. Even in this case it will be borne by the producer. In order to re-imburse himself the producer may increase his output. The consumer benefits but the incidence of licence duty will fall on the producer. It is generally too small to make the producer try to shift it.

17. Tax on Quasi-rent. Quasi-rent represents the return on a factor of production (usually durable goods) whose supply is temporarily fixed. If a tax is imposed on this return, it will tend to stick at the point of its first impact. In this it is like economic rent. The supply of the factors is inelastic over a short period and the owner cannot shift the tax by withdrawing its supply to the consumer of the product. But over a long period a tax on quasi-rent is like a tax on interest. It will tend to check investment in that direction. The supply of the commodity will contract and its price will rise so that the tax is shifted to the consumer. Thus the incidence of a tax on quasi-rent tends to fall on the producer in the long run and on the consumer in the short period.

18. Tax on Wages. Wages are not taxed directly in modern

times. But the contributions by the workers to the schemes of social insurance may be regarded as taxes on wages. If the tax is a general tax applying to all workers, the workers may not be able to shift it to the employers if the demand for labour is elastic and the supply is inelastic. It is well known that the relative bargaining strength of the wage-earners is weak. If a tax is imposed on them, it is not in their power to get an increase of wages and unless they can get it, the tax must be borne by them. Workers do not always emerge victorious in a labour dispute. The greater the elasticity of demand for labour, the greater will be the incidence on them of a wage tax and *vice versa*. The tax falls on the workers if it lowers their standard of living. But if it lowered efficiency, the production costs will increase and the price of the product will go up as the result. In this case the tax will be shifted to the consumers. Workers, however, being themselves consumers will have to bear their share of the tax even when it is so shifted.

But a tax on special types of labour may be shifted. They may shift to other trades or start an independent trade. There will be a greater element of elasticity in the supply of labour in this case and the demand may not be so elastic. If, therefore, the supply of labour is elastic but the demand is inelastic, the wage tax is surely shifted to the employers.

19. Taxation of Surplus. There is a certain minimum remuneration which must be assured to a factor of production before its supply will be forthcoming. There is a minimum wage, a minimum rate of interest and a reasonable and normal rate of profit which each agent must respectively get. Their incomes constitute the necessary costs. These necessary costs cannot be taxed. If a tax is imposed it will be shifted. For example if a tax cuts down the normal profit, it will discourage enterprise. Production may be cut down and the tax shifted to the workers or consumers. If the minimum wage is taxed, it will either lower efficiency or reduce the supply of labour. This will mean a shifting of the tax either to the consumer or the employer. The taxing of the necessary costs will threaten the withdrawal of the factors concerned. Thus it is said that all taxes have a tendency to be shifted to a surplus, *i.e.*, an income over and above the minimum necessary to ensure the regular supply of a factor. If it is the monopolist who is enjoying a surplus, he will bear the tax himself. If surplus arises from the manufacture of a necessary of life, then the demand being inelastic the tax will be wholly shifted to the consumers. If the commodity is a luxury the incidence will be borne partly by the producer, partly by middleman and partly by the consumer.

20. Incidence of Sales Tax. The tax is levied on the turnover, profits or no profits. Its incidence is a complicated affair, because it covers commodities of widely divergent nature. If the demand for a commodity is inelastic, its price can be raised and the tax will be then shifted to the consumer to that extent. But if the demand is elastic, it may be shifted partly to the consumer and may remain partly on the seller. The sales tax may make heavy inroads into profits which may lead to retrenchment in staff and management, restrict enter-

CHAPTER XLVII

PUBLIC DEBT

✓ 1. **The Beginning and Growth of Public Credit.** Borrowing by public authority is of a recent growth. It was not known till the eighteenth century. Whenever there was an emergency, usually a war, the monarch relied on his hoarded wealth or borrowed on his own personal credit. Books on history abound in instances of fabulous hoards and accounts of loots and sacks of hoarded wealth either from King's treasuries or from the temples and churches. Mahmud Ghaznavi's seventeen raids on India are well-known and so are the predatory raids of Shivaji. Shivaji is supposed to have taken away from the first sack of Surat Rs. 10,000,000. Athenian hoards were believed to be enormous. The private treasure of a ruler of an important Indian State is considered to be more than the equivalent of £10,000,000 and his jewels, when valued at the time of his accession were found to be equal to £150,000,000. It was on treasures like these that monarchs in every country relied for financing a war or a programme of public works like that of Sher Shah or Feroz Shah Tughlak.

But this method of finance is out of harmony with modern conditions. It would be out of date, inadequate and uneconomical. In the nineteenth century public credit replaced private credit and once started the growth was phenomenal. Development of trade and industry since the introduction of the limited liability principle, growth of banking and insurance companies, perfecting of fiscal arrangements and the evolution of a well-ordered system of finance, e.g., meeting recurring expenditure out of current revenues, establishment of a sound system of administration and justice are some of the factors that are responsible for the rapid growth of the system of public credit. An average citizen today has a sense of security and confidence and his willingness and ability to lend have increased. These constitute a solid foundation of a system of public credit.

This system of public credit making it easy for the States to borrow has led to tremendous increase in the indebtedness of modern States. The public debt of 27 countries in 1900 was £ 6,079,000 000, in 1913 it increased to £ 8,566,000,000, and in 1933 to £ 22,000,000,000. Almost the sole responsibility for the phenomenal increase lies on war. The net cost of the war (1914-18) was estimated at £ 42,000,000,000.¹ The war of (1939-45) has been infinitely most costly and when final estimate of its cost comes to be written down, the figure will no doubt be staggering.

2. **The Benefits and the Dangers of Public Credit.** The system of public credit offers many advantages. In the first place, although credit does not increase capital yet it certainly makes

1. Findlay Shirras—Science of Public Finance, 1936, p 779.

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capital more productive. This leads to increased production, increased national wealth and consequently the raising of the standard of living. *Secondly*, but for public credit huge public works like roads, railways and canals would have been simply out of the question and let us imagine what our condition would have been without these. *Thirdly*, public credit is sometimes the only means of restoring a country to its normal condition when it has been attacked by a natural calamity like floods, earthquakes, etc. It may be beyond the ordinary revenue strength of the nation to cope with the damage and destruction wrought by such calamities. *Fourthly*, a modern war can never be fought without having a resort to public borrowing. A nation which comes to the end of its financial tether during war earlier is bound to go under. Public credit thus safeguards the very existence and liberty of a nation.

Fifthly, it is through public borrowing that backward countries full of natural resources are enabled to develop themselves and develop their potential natural wealth.

Sixthly, for the lending nations, too, public credit proves to be of immense advantage. For the citizens of the lending country safe and remunerative channels of investment are opened out. International lending has a favourable reaction on balance of trade and steadying influence on foreign exchange. *Finally*, a system of international loans has many non-economic advantages. The lending countries become interested in the material advancement of the debtor country. It broadens the outlook of its citizens. The mutual intercourse between the nationals of different countries leads to mutual understanding and as such may go a long way in preserving international peace.

But public credit has not proved to be an unmixed blessing. It has its dangers too. The following are some of the disadvantages of public borrowing :—

(i) The most obvious danger of public borrowing arises from the dangerous facility with which Governments can borrow. It leads to over-borrowing, i.e., borrowing beyond the taxable capacity of the people. The result is that the State is either forced into bankruptcy or default or repudiation of debt.

(ii) Reckless borrowing especially by young and undeveloped countries, has led to extravagance. Expensive schemes are launched without carefully calculating their probable yield and with no reference to the country's capacity to bear the burden of such schemes. This saddles the posterity with interest payments without any corresponding return. There is a lot of waste.

(iii) Many countries have lost their political independence. Egypt is one such country. The revenues of the country have sometimes to be mortgaged to the foreign bond-holder to safeguard whose interest the foreign Government steps in.

(iv) Foreign loans lead to a constant drain of wealth out of the country. If the money has been borrowed for unproductive purposes, the interest payments represent a dead weight which posterity has to carry. It is a drain, pure and simple.

(i) Public borrowing leads to international complications and instead of promoting peace, it may endanger peace. Vested interests are created. Public loans can well be a source of constant friction between the lending and the borrowing nations.

On the whole, the advantages of public credit far outweigh its disadvantages. There are few things in the world which present only one side, the brighter side Public borrowing has the darker side, but its brighter side is more prominently displayed. It has conferred numerous and lasting benefits on all concerned, lenders and borrowers.

3. How the Governments Raise Funds for Emergencies. The following six methods are known to public financiers for raising of funds when an emergency arises—

- (i) The utilisation of hoarded wealth.
- (ii) The sale of Government property.
- (iii) The imposition of new taxes and raising of the rates of old taxes.
- (iv) The floatation of temporary loans.
- (v) The floatation of permanent loans.
- (vi) The issue of inconvertible paper money.

Few modern Governments have any hoarded wealth although jewellery or other hoarded wealth may be the personal property of the ruler. As for the second source, *i.e.*, the sale of public property, it is not an important source in old countries where public lands are supposed to have been disposed of long ago. A modern Government would like to acquire more property rather than sell off that which it already possesses. We are really, therefore, left with the last four and we shall say a word about each of them.

4. Imposition of New Taxes and Enhancing the Rates of the Old. Whenever an emergency, like the war, comes the first means of raising public funds that the government looks to is to raise the rates of some of the old taxes, like the income-tax, excise duties, railway and postal rates, etc. In addition some new taxes are also imposed. New excise duties may be levied and tariff list may be enlarged.

But there is a limit beyond which it is not safe for the Government to proceed in the direction of taxation without courting unpopularity. The taxable capacity is after all limited. There is a point beyond which people are unable to pay taxes or unwilling to tax themselves. If taxation is excessive it may also impair the productive capacity of the nation besides over-straining the loyalty of its citizens. The Governments, therefore, follow the line of least

resistance and do not overwork their tax system. Taxes are no doubt increased but they soon have a resort to other methods of raising revenues. To finance a modern war by means of taxation will be height of folly and is sure to lead to a revolution. The home front will crack before long. Much reliance, therefore, cannot be placed on this source.

5. Temporary Vs. Permanent Loans. *Temporary Loans* are usually raised by the sale of treasury bills or by ways-and-means advances from the Central Bank. As a rule they are raised internally. The following are some of the considerations which either favour or necessitate short-term borrowing :—

(a) When the prevailing rates of interest in the money market are abnormally high, it will be unwise for the Government to saddle itself with heavy interest payments for a long time. It will be prudent in such cases to raise a temporary loan till the rates come down and time for a permanent loan is more opportune.

(b) When the Government has to tide over a temporary difficulty, it will be unnecessary to raise a permanent loan. The cases in point are covering a budgetary deficit or simply bridging the gap between immediate expenditure and expected income, i.e., the new tax revenue may not start flowing in till June or July and there may be a temporary shortage of funds in April and May. Temporary borrowing is the only proper course in such a case. If the purpose is temporary, the loan cannot be permanent.

(c) Temporary borrowing has the merit of enabling the Government to carry on its activities unhampered and avoid the inconvenience of raising a permanent loan.

(d) The issue of temporary loans is welcome to the money market. Treasury Bills are the safest and the most profitable investment for the banks, and they constitute an ideal outlet for their surplus funds.

But as against this, temporary loans have some drawbacks :—

(a) When the Government enters the money market for raising temporary loans, the funds of the banks are diverted from trade and industry to the Government treasury. Trade and industry are consequently starved. Even the bank deposits decline. This competition from the Government in the money market beyond a limit may have very adverse economic effects.

(b) Existence of a large floating debt may prove to be a source of embarrassment to the Government. It may shake public confidence in the financial stability of the State and may produce unhealthy repercussions. When a big temporary loan matures, the Government finances may be subjected to severe and unbearable strain.

(c) It is generally seen that when one temporary loan matures, another is issued to repay the first. Temporary loan, therefore, in

fact becomes a permanent one. The funds of the money market are indefinitely locked up to the detriment of commerce and industry.

(d) The existence of a large floating debt has dangerous potentialities for the future when a real emergency arises. For example when war breaks out, the Government will at once need large funds but if it is already indebted and has raised loans to the very hilt, the prospects of raising new funds will be gloomy indeed.

(e) Another danger inherent in temporary loans is that it generally leads to inflation. When the loan matures, the Government may just print notes to repay the debt. The dangers of inflation are only too well known to the present generation in India. We shall discuss these dangers presently.

(f) There is no legislative control over temporary borrowing and there is not much publicity. It is carried through by purely executive action. The danger of over-borrowing, therefore, is a real danger. Over-borrowing may lead to extravagance.

Permanent borrowing has merits and demerits of its own. In favour of a permanent loan we can say that.

(a) It is profitable when the interest rates prevailing are low. Such conditions are really favourable for the launching of some public works programme for the capital charges will be low.

(b) A long-period loan does not embarrass the Government. Timely arrangements can be made for its repayment.

(c) Government bonds are a very good investment. They provide a remunerative outlet for the trust funds, funds of the banks and of insurance companies. There is no doubt that saving is stimulated and the nation is enabled to accumulate large capital.

(d) It also satisfies our sense of equity to think that the future generation which is certainly going to benefit by public works like irrigation and railways and may also benefit from the spoils of the war, must also be made to bear a due burden. This can only be done if these ventures are financed by means of long-term loans.

(e) Long-term loans are a veritable necessity for the prosecuting of a modern war or for repairing the destruction wrought by it. The restoration of the ruined areas to their normal condition must require funds too large to be raised by taxes. Such a huge burden cannot be placed on the finances of a few years. It must be spread over a long period to make it bearable. This can only be done by resorting to a long-term loan.

(f) Loans taken for productive purposes create national wealth out of which both the principle and interest can be met and still the sources of wealth like canals and railways remain in the country and augment national wealth in the future. Long-term loans are thus very profitable.

(g) Finally, long-term loans give the citizens a permanent interest in the State. They arouse civic consciousness and nurture the

sentiment of patriotism, for a very direct relation is established between the citizen and the State through public borrowing.

Long-term or permanent borrowing is, however, not free from objections. Some of which are as under :—

(a) It is undesirable to raise a long-term loan when the rates of interest are ruling high. To issue a long-term loan at such a time will certainly be objectionable from the public point of view.

(b) It is also not quite fair that we make posterity suffer for our mistakes. Why should the future generations of Germany be punished for the blunders that Hitler committed. In the same manner, through miscalculations a big public works programme may be miscarried and posterity may be saddled with a losing concern.

(c) As compared with taxes, it is so easy for the Government to get money by raising loans. Taxation is not popular. People will not let the Government easily tax them and waste public money. But the Government can further an unpopular cause or prosecute a doubtful venture by loans. This is a dangerous weapon in the hands of the Government and it has an undemocratic flavour. Wars would come to an end if they come to be financed by taxes alone.

(d) A large public debt acts without doubt as a drag on trade and industry. Large interest payments necessitate heavier taxation. Excessive taxation must hamper economic progress. Industry will be subjected to a great strain.

In spite of these objections there seems to be no escape from borrowing. Every Government borrows and must borrow. Political exigencies are such.

Long-dated loans can be internal or external, i.e., they may be raised from the inhabitants of the country or taken from a foreign Government. In the case of an external loan, the interest payment means a regular drain of wealth out of the country. It may have very undesirable consequences, e.g., loss of political independence. On the posterity it means a real burden if the loan was taken not for productive purposes but for prosecuting a war.

6. Can a Nation Borrow Without a Limit? Obviously not. It is just like the case of an individual. Debts after all have to be repaid. A State, therefore, cannot borrow without any regard for its paying capacity. The State can borrow in different forms and in each case there is a limit beyond which it cannot go consistent with its own safety. Let us consider these forms of borrowing and the limit in each case.

(a) *Issue of Paper Money.* It is called a forced loan. Now, it is admitted that inflation is a very dangerous weapon; we are soon caught in a spiral of rising prices. If carried to an excessive limit, the paper money will become worthless and the entire economic life in the country will be paralysed. This is what happened in Germany in the war (1914-18). There is a limit beyond which notes cannot be printed, the limit will be indicated by the rising prices.

(b) *External Loan.* In this case borrowing depends on financial stability and credit of the country. Few countries have unlimited national credit. The budget of each country can give some idea beyond which no nation can expect to borrow from abroad. The foreign Government will be guided by the tax-bearing capacity of the citizens of the borrowing State and the *per capita* income in the country. No foreign Government will lend without a limit.

(c) *Internal Borrowing.* Here again there is a limit beyond which borrowing is not possible. The maximum limit is indicated by the physical saving possible. Theoretically it may be said that the Government can borrow all what the people can save. Actually this would seldom happen unless, of course, the State is passing through a life and death struggle, that is when it is fighting for its very existence. But if Government borrows all what the people save, nothing is left for the finance of trade and industry. A continuous flow of new capital is needed not merely to maintain the existing capital intact but to create new capital, *not merely to run the industry efficiently but progressively.* If the Government stops this flow or reduces it to a mere trickle, trade and industry will undoubtedly be hampered. We can, therefore, say that normally a State can borrow only the surplus funds, i.e., funds over and above those normally required by trade and industry.

We thus come to the conclusion that whether a State borrows from abroad or from inside the country or merely issues paper money, in each case there is a limit and that limit cannot be crossed either without endangering the safety of the State or impairing the production capacity of the nation.

7. **Inflation as a Means of Raising Public Funds.** A modern war has become so costly that it has become impossible for a country to wage it without having a resort to the printing press. Loans and taxes do not prove adequate. In the later stages of the war (1914-18), Germany almost exclusively relied on this source and it proved her undoing. In the recent war again, all belligerent countries had to tap this source, some more and others less. Even in England and America there was a considerable increase in note-issue. In India it had assumed dangerous dimensions and evoked spirited protest from 20 top Indian economists. Between September 1939 and March 1943 the note-issue in India increased by 80%. Thus note-issue as a means of raising funds for emergencies has come to occupy a definite place in public finance.

But it is admittedly the worst means and one that is fraught with serious danger. This is not the place to discuss the adverse economic effects of the over-issue of paper currency. But we may emphasise that inflation or over-issue of notes has got an unsettling effect on internal trade; it disturbs international trade by upsetting foreign exchanges. It engenders speculation and imports an element of uncertainty into business relations. Thus it cuts the very root of healthy trading which is based on the possibility of making reasonable forecasts. In the words of Dalton, "Doped by

artificial prosperity, they (business men) become first light-hearted and then light-headed, miscalculate prospects, misdirect resources, and launch enterprises which are economically unsound. The mere cessation, sometimes even mere slackening in the rate of inflation, is enough, without any positive deflation, to break the illusion, to destroy business confidence, to disappoint anticipation of demand, and to put out of action sometimes, for considerable periods, a large part of the productive power which these business men control." The steep rise in prices which follows in the wake of over-expansion of currency causes incalculable hardship to some members of the community. It hits hardest the poor consumer, the fixed incomist and the wage-earner. The debtor-creditor relations are also upset. The net result of inflation is to bring undue gains to some and undeserved losses to many. "It is a paradise for speculators and profiteers who are enriched through no effort of their own, partly at the expense of wage-earners (prices go up by the lift but wages by the stairs) but still more at the expense of those with fixed incomes."¹

The people's confidence in the stability of the State is rudely shaken. There is a flight from currency and this may ultimately have dire consequences. The government is caught in a vicious circle to come out of which is no easy task. Every extra issue of notes raises prices; the government must find more money, therefore, to make its purchases. This leads to more issue of notes and so on. It is a very slippery road and government inflating its currency is heading for an economic and political disaster.

But apart from these dangerous reactions of inflation, the financial pundits have denounced it violently as being opposed to sound canons of finance. It has been called a forced loan and also free of interest, for the government by issuing notes equips itself with purchasing power at the same time diminishing the purchasing power of the people. If I have a 100-rupee note and the government doubles the note issue, the prices, according to the quantity theory of money, will double and my 100-rupee note will be able to buy goods worth Rs. 50 only. There is no diminution in the amount of money that I have but its purchasing power has gone down and money has no other use except to help to buy goods and services. It simply comes to this that the people are forced to place at the disposal of the government goods and services which they could have purchased and this without their knowing it. It is not only forced loan but a concealed loan. It is the waving of the magic wand. Prof. C. N. Vakil calls it robbery.

The most fundamental objection to this mode of raising money is that it violates the canon of equity or equality. When prices rise all rich and poor pay high prices and they all buy at the same price. If the price of sugar rises from 4 as. a seer to 8 as. a seer, the poor man pays double the price along with the rich. But the rich can afford, the poor cannot. Inflation may be compared to proportional

1. Thomas, S. E.—*Elements of Economics*, 1936, p. 671

taxation. It pays little heed to capacity to bear. In its effects, therefore, it is regressive. The poorer sections of the community are compelled to make a larger contribution to State finances and they are the people who can afford to pay the least. This is sheer injustice. Wealth is redistributed in favour of the already rich.

Thus inflation is politically dangerous, economically disastrous and morally indefensible. Had it not been for the dire need in which the States sometimes find themselves in, this method of raising funds perhaps would never have been resorted to. It accentuates inequalities of wealth distribution ; it paralyses the machinery of wealth production and even as a source of revenue it soon gets dried up.

8. Classification of Public Debt. According to Findlay Shirras public debt may be classified as under :—

(1) *According to the period or duration of the loan.* On this basis the debt may be permanent or irredeemable and redeemable debt, or short-term and long-term debt. In this connection a distinction is usually made between funded debt, unfunded debt and floating debt.

Funded debt. It is a debt which is payable at some distant date after due notice and in accordance with the terms announced at the time of floating the loan. The term is usually applied in the sense of permanent debt, i.e., when the lender has no claim for repayment of the principal.

Unfunded debt. It consists of loans which are repayable on a definite date.

But as the time for repayment draws nearer the long-term loan becomes a short-term one and as Dalton puts it, "Like a boat which securely beached on the shore, it is sooner or later floated off on the rising tide of the time."

Floating debt. It is the term usually applied to loans payable within a year such as Treasury Bills and Ways and Means Advances from the Central Bank.

(2) *According to the method of floatation.* On this basis the loans may be voluntary or compulsory. In modern times all loans are voluntary. There are no forced or compulsory loans

(3) *According to the place of floatation.* The loan may be internal when it is subscribed to by persons and individuals living under the government raising the loan. Or the loan may be an external loan when it is subscribed to by persons and individuals living abroad. The external loan may be changed into an internal loan when nationals buy the external loan in the open market. During the recent War (1939-45) Government of India has been able to wipe off its external debt by means of repatriation schemes. The net result has been that the government has increased her internal indebtedness

and with the money so raised external loans have been paid off. This is really the changing of the external loan into an internal one.

The effect of an internal loan is merely to redistribute wealth within the community at the time of raising the loan and the repayment of the principal and interest. But when an external loan is raised the wealth is first transferred from the lending to the borrowing country, and at the time of repayment it is transferred from the borrowing to the lending country.

(4) *According to the purpose for which a loan is contracted.* The debt is productive if it is taken to finance some productive schemes like railways and irrigation. It is unproductive or dead-weight debt when it is not covered by any assets yielding revenue. A war debt may be called unproductive or dead-weight debt.

☞ **9. Debt Redemption or Repayment.** Modern Governments make it a point of honour to repay their debts. Debt repayment maintains and strengthens the national credit, so that if a national emergency arises later it will be easy to raise funds; the State finances will not be down pressed under a heavy debt service. It will also release funds for trade and industry. A civilised State must honour its obligations. Hence all States make adequate arrangements for the repayment of interest and the principal.

The following are some of the methods adopted :—

(1) *The utilisation of surplus revenue.* This is an old method but badly out of tune with modern conditions. Budget surplus is not a common phenomenon. Even when there is a surplus it is so insignificant that it cannot be used for making any material reduction in public debt.

(2) *Purchases of government stock in the market.* The government may buy its own stock in the market thus wiping off its obligation to that extent. It may be done by the application of surplus revenues or by borrowing at low rates if the conditions are favourable.

(3) *Terminable annuities.* When it is intended completely to wipe off a permanent debt, it may be arranged to pay the creditors a certain fixed amount for a number of years. These annual payments are called annuities. It will appear that during the time these annuities are being paid there will be much greater strain on the government finances than when only interest had to be paid.

(4) *Conversion.* This is a method for reducing the burden of the debt. A government may have borrowed when the rate of interest was high. Now if the rate of interest falls it can convert a high-rated loan into a low-rated one in this manner. The government gives notice to the creditors that they should either agree to reduce the interest rate for future payments or it will exercise its option of repaying the loan. In case the bondholders do not accept the lower rate, then the government will raise a new loan at lower rate of interest and with the proceeds pay off the old debt. The effect is to convert a high-rated loan into a low-rated one. The financial burden is consequently reduced.

(5) *Sinking Fund*. This is the most important method. A fund is created for the repayment of every loan, by setting aside a certain amount every year out of the current revenue. The sum to be set aside is so calculated that over a certain period, the total sum accumulated together with interest thereon is enough to pay off the loan.

Apart from these normal methods of debt reduction, some unorthodox or revolutionary schemes for debt reduction have also been put forward. They include :—

(a) *Debt Repudiation*. A government may refuse to recognise obligations incurred by a former government. Unless the government comes into power as the outcome of a revolution, such a revolutionary proposal will not be seriously put forward by any sane politician. It is usual for the governments to honour the commitments of the predecessors.

(b) *Compulsory Reduction of Interest*. This looks less offensive especially if the conditions have so changed as to make the high rates onerous. But it does not look nice for a civilised government to violate the sanctity of the contract. A democratic government will not lightly do it.

(c) *Steepest Taxation of Higher Incomes*. We have already said that excessive taxation may have very adverse effects on trade and industry. It may dry up savings—a source of new capital. Industrial plant has to be renovated and reconditioned. Timely repairs and replacements are essential if it is to be kept in proper trim. Unless this is done progress of industry is sure to be hampered. It is very necessary, therefore, in the interest of the business prosperity of the community, that no financial measure should be taken which is calculated to check the flow of capital and business ability. Already the level of taxation has reached a high pitch. To make it still more steep will be to encroach upon the supply of capital essential for the maintenance and progress of trade and industry.

(d) *Capital Levy*. The advocates of the levy propose that there should be a special debt redemption levy, called capital levy, for the purpose of reducing the war debt. A law would be passed by which "every man and woman of a suitable degree of wealth would be deemed to die and to come to life again next morning as the fortunate heir to his or her own property on payment of an appropriate ransom." Such a proposal found much favour just when the first world war (1914-18) was over. The psychological conditions favourable to the levy were present. But as the war receded, the enthusiasm of the advocates of this proposal was considerably damped. Administratively the levy is quite practicable but it cannot be carried through without general assent. The Colwyn Committee on National Debt and Taxation appointed in 1923 came to the conclusion that "even if there were a prospect of a capital levy being well received the relief from debt which it offers would be insufficient to justify an experiment so large, difficult, and full of hazard."

1. Quoted by Findlay Shirras—*Science of Public Finance*, 1936, p. 566.

Several objections have been advanced against the ^{of} a capital levy :—

In the first place, it is pointed out that it will damage both capital and credit. Trade and industry must inevitably suffer. This sort of confiscation is bound to shake public morality and check the flow of capital into industry.

In the second place, it proposes to penalise the thrifty. Those who have been extravagant cannot be touched by the State. They go scot free. The shadow of the levy must frighten away capital and discourage saving. "It would be a case of burning your house to roast your pig."

Thirdly, the capital levy is bound to depress trade, bring down prices and wages and cripple the borrowing powers of the business men.

Finally, there are bound to be administrative difficulties involved in a measure of such a nature.

In favour of the capital levy it was pointed out (a) that by relieving the exchequer of heavy burden of the debt charges, funds would be released for social services. The conditions of the masses can be vastly improved. This is not now possible for a big slice of the tax revenue is eaten up by the stock holder.

(b) That it would equalise the sacrifices made in the war by the rich and the poor. During a war, the rich remain at home whereas the poor join the army and suffer untold privations at the front.

(c) That it would be in conformity with the canon of equity. Those who are able to pay, will be made to pay.

(d) That it is much better to cut short the agony and pay off the debt at one stroke rather than go on paying for 200 years.

(e) That a capital levy is no more unjust than high taxation. Both belong to the same category. Both can be condemned as immoral and confiscatory. There is nothing immoral in the levy. Morality is only a relative term.

In face of such conflicting arguments, it is not so easy to give a verdict. Opinion is bound to remain divided on an issue like this. Our own opinion is that a capital levy is beyond the sphere of practical finance ; there are really no short-cuts to debt redemption.

10. Burden of Public Debt. In order to assess the burden of public debt we shall have to consider the nature and the purpose of the public debt. If the debt is taken for productive purposes, e.g., for irrigation and railways, It will have no burden but confer a benefit provided the scheme has been successfully executed. But if the debt is unproductive it will impose both money burden and real burden on the community and the measure of the burden will depend on whether the debt is internal or external.

The internal debt involves a series of transfers of wealth within the community. For example when the loan is raised, money is

transferred from the lenders to the government, and the government then makes payments to contractors, government servants or to those people from whom it buys goods and services. Money is thus transferred from some sections of the community to other sections. In this case there is obviously no direct money burden of the debt.

But there will be a direct real burden (*i.e.*, sacrifice, hardship or loss of economic welfare) on the community depending on the nature of these transfers of wealth. If by these transfers wealth comes to be more evenly distributed, *i.e.*, wealth is transferred from the rich to the poor, then instead of being burdensome the public debt will be considered beneficial. If, on the other hand, the public debt enriches the rich at the expense of the poor, it imposes a real burden.

Let us analyse carefully the nature of the transfer. In order to repay the interest and the principal of the debt, the government must levy taxes. The tax-payers pay and the bondholders receive. The bondholders are without exception rich people. But the tax burden does not exclusively fall on the rich unless it is very sharply progressive which is seldom the case. The tax burden falls on the rich and the poor both and in case of indirect taxes, it may be more on the poor than on the rich. The net result is that the wealth is transferred from the poor to the rich. This means a net loss of economic welfare.

This burden is accentuated by the fact that the transfer is from the young to the old (the bondholders, the creditors of the government are generally advanced in age) and from the active to the passive members of the community. "Here," says Dr. Dalton, "if nowhere else in the sphere of public finance, the voice of equity rings loud and clear. There is also a general presumption, on grounds of production (besides on grounds of distribution) against the enrichment of the passive at the expense of the active, whereby work and productive risk-taking are penalised for the benefit of accumulated wealth."¹ Thus internal debt has adverse repercussions both on production and distribution of wealth. This is its direct real burden.

Its indirect real burden will lie in the check it imposes on production. The production is likely to be checked if the desire and ability to work and to save are reduced. If the repayment of debt involves very heavy taxation, it is likely to reduce the ability and the willingness to work and to save.

What about the burden of an external debt? The external debt also involves a series of transfers of wealth but not within the same community like the internal debt. This makes all the difference. When the loan is raised, wealth is transferred from the lending to the borrowing country, and when it is repaid the transfer is in

1. Dalton—Principles of Public Finance, 1943, p. 244.

the opposite direction. The amount of money paid by the debtor country towards interest and the principal is the measure of the direct money burden on the community. But if we want to know the direct real burden (*i.e.*, loss of economic welfare) we shall have to consider the proportions in which the rich and the poor contribute in order to make these payments. The government will raise the required money by taxes. If the taxes fall largely on the rich, then the direct real burden will be less than it would be if the incidence is largely on the poor. The payment that we make to the foreign creditor gives him a control over our goods and services. He does not take away our money; it is of no use to him. He buys with that money goods in our country. An external loan thus sets up a drain of goods from our country. In the absence of debt payments these goods would have been enjoyed by ourselves. This means a diminution of an economic welfare and hence a direct real burden.

The indirect burden of the foreign debt lies in the check to production of wealth in the country. Taxes imposed in order to raise funds for debt payments may reduce willingness and ability to work and to save. The debt payments made by the government will reduce public expenditure in the directions which would have stimulated productions. Hence production may be checked.

It is sometimes said that debt payments to foreign countries stimulate production and create more employment. International payments can be made only by exporting goods. For this purpose a country must produce more. Thus production is stimulated but only in certain directions. There is no general increase in production and employment. Factors of production are limited. If they are needed in the export industries, they will have to be withdrawn from other industries which must consequently shrink. Thus there is only a diversion of resources and no net increase in production and employment.

11. Indian Public Debt. India occupies quite a happy position so far as her public debt is concerned. The bulk of her debt is invested in solid and lucrative assets like railways and irrigation works or is lent out to Indian Provinces and States.

Indian public debt has also been on the increase. In 1792 it was only £7 million. The wars waged by the East India Company made additions to it and on the eve of Mutiny of 1857 it stood at £60 million. On account of the Mutiny it rose to £100 million in 1860. Since then there has been a steady increase in our productive debt. In 1900 our total debt was £200 million of which £50 million was unproductive. By 1914 the unproductive debt was reduced to a small figure of Rs. 3 crores. But the Great War (1914-18) meant a great increase in unproductive debt which in 1924 rose to Rs. 258 crores and the productive debt at this time was Rs. 700 crores.¹

1. See our Indian Economics, 1945, p. 543.

Till 1939 a very large portion of our public debt was external. We know that external debt is a dead weight on the country whereas internal debt involves merely a redistribution of wealth within the community. This is a less commendable aspect of our public debt. The extent of our foreign obligations was estimated in 1934 at £612 million.¹ It was estimated that Rs. 15 crores went out of the country every year in interest payments.

But it is very gratifying to note that our sterling obligations have now been wiped out on account of the financial transaction with His Majesty's Government during the recent War (1939-1945). The following figures show the change :—

March 31, 1938. March 31, 1946

Sterling Loans and Railway Annuities	Rs. 445 crores	Rs. 39 crores.
Rupee Loans and Treasury Bills	...Rs. 484 „	1571 „
Unfunded Debt (Cash Certificates, Provident Funds, Savings' Bank Deposits)	Rs. 229 „	320 „
	Rs. 1158 „	1930 „

During the war India had a markedly favourable balance of trade. She had to recover a portion of her defence expenditure from His Majesty's Government. She had to incur lot of expenditure on behalf of the Allies. The net result of all this was that a huge amount of sterling accumulated in England to her credit. A part of the accumulation was utilised for redemption and repatriation of Indian public debt. Our sterling balances on March 31, 1946, stood at £1930.

About 90% of the Indian debt is funded or permanent. The floating debt largely consists of the Treasury Bills issued by the Government which in 1940-41 amounted to Rs 39.30 crores.

Till recently the Finance Department had no deliberate and systematic plan of debt redemption. The credit of having introduced the first systematic scheme of debt redemption belongs to Sir Basil Blacket who was Finance Member in the Viceroy's Executive Council in 1924. He proposed to set aside every year Rs. 4 crores plus 180th of the excess of debt outstanding at the end of each year over that outstanding on 21st March, 1923. The scheme had, however, to be suspended in 1933-34 when owing to loss of income due to depression and rail-road competition, the railways ceased making any contribution to the general revenue. The provision for debt redemption was made for the payment of postal savings and postal cash certificates. Before, reliance was placed on the inflow of funds from these very sources for meeting these obligations. But regular provision has been made now since 1930. We see that our debt redemption arrangements are far from being scientific.

1. See India Analysed, Vol II, p. 87.

12. War Finance. How should the war be financed? No dogmatic and simple answer can be given to such a question. Much depends on the total cost of the war, the duration of the war, the conditions in the money market and above all the psychological or political conditions. A course dictated under one set of conditions may have to be deviated from under another.

We may refer here to an old controversy: should war be financed by taxes or loans?

There are economists who have advocated the *all-tax method* and others who have advocated the *all-loan method*. Ricardo was an uncompromising exponent of the all-tax method. He was opposed to borrowing for war purposes, for it created a permanent deficit and made a heavy inroad into capital. The all-tax method is also advocated to bring home to the present generation what a war means, so that its bellicose propensity receives a wholesome check. "The expenses of a war," said Gladstone, "are the moral checks which it has pleased the Almighty to impose upon the ambition and the lust of conquest that are inherent in so many nations."¹

The all-tax method is advocated on the ground that it would keep the war expenditure at the minimum level. The duration of the war, too, would be cut down to the minimum. It would rule out the possibility of inflation which is a necessary accompaniment of a modern war and which creates a host of problems causing a severe headache in the post-war era. This method will enforce vigorous economy in private consumption and this is what ought to be. It will make war an affair of the present generation and make it rightly suffer for its own mistakes.

But as against this view it is pointed out that no tax system can bear the tremendous strain of a modern war. Heavy taxation would reduce capital and adversely affect production. Heavy taxation may overstrain the loyalty of the influential upper classes. It may encourage the fifth column activities. The home front would thus crack. This the statesmen are anxious to avoid at all cost.

Loans, on the other hand, are more popular. The government can avoid unpopularity and damping of the enthusiasm of the people. No odium attaches to borrowing as it does to a tax proposal. The subscriber to a loan knows that he will receive more in interest than he shall have to pay in the form of taxation as his contribution towards interest payment. He may even stint himself of the necessities of life and work very hard and earn more in order to buy war bonds. This is bound to stimulate the war effort. Heavy taxation may impede production by encroaching on capital required by trade and industry. But the loans may stimulate production. The lenders will lend only the surplus over and above their own needs. Thus the industry does not suffer. The proceeds of the loan will be spent by the government in buying goods and services. This will give a fillip to trade and industry.

1. Quoted by Findlay Shirras—*Sciences of Public Finance*, 1936 p. 690

So here are two views : (1) Finance war by borrowing ; (2) Finance it by taxation. Both these views are extreme and one-sided. The correct view is that we must use both sources, viz., loans and taxes. Adam Smith said : "The want of parsimony in time of peace imposes the necessity of contracting debt in time of war." Our view is that no amount of parsimony in time of peace will be enough to finance a modern war when it comes. Borrowing is essential. Borrowing becomes essential in another way. When war breaks out government needs funds immediately ; but the tax revenue will take time to begin flowing in ; money must be borrowed to fill the gap. The right motto for the war financier is "tax to the hilt and borrow the rest."

There is a third source of war finance, viz., created money or issue of paper money. It is a very dangerous weapon. It is used by all belligerent nations in a modern war. But it must be used sparingly and with utmost care. We have already discussed its evils (see Section 7).

We thus arrive at three sources of war finance (1) Taxation, (2) Borrowing, and (3) Issue of paper money.

13. Who Bears the Burden of the War, Posterity or the Present Generation. ? The cost or burden of the war may be the *money cost* or *real cost*. The money burden or the money cost of war means the total amount of war expenditure incurred. It is borne by those who contribute towards the war expenditure, viz., the tax-payers (the present generation); the subscribers to the war loans (the present generation) and those who pay interest and principal (the tax-payers in the future generation). The real cost of the war on the other hand, means terror, anxiety, privation, bereavement, hatred and moral degradation.

Whether the burden of the war is on the present generation or on the future generation will depend on the methods adopted to finance the war and their economic consequences. So far as war is financed by the issue of paper money, the burden seems to rest on the present generation. The evil effects of inflation are likely to work themselves out in the course of one generation and it is not likely to leave any seeds which may sprout in the future.

It is commonly believed that taxation places the burden of the war on the present generation and the loans on the future generation. This is not necessarily so.

There is some reason to believe that taxation hits the present generation most. The tax-payers have to curtail their present consumption. The adverse effect of heavy taxation on industry may prevent its expansion and create a serious shortage of goods. But are we so sure that the adverse effects on production will not cast their shadow on the future generation ? The productive capacity of the industry may be crippled to such an extent that production in the future will diminish. Heavy taxation may not leave any reserve for the

replacement and renovation of industrial equipment so that the future generation may be saddled with obsolete and inefficient plant. A check to saving and accumulation of capital in the present generation, which heavy taxation always involves, is bound to affect production in the future adversely. Thus the stock argument of those who advocate the financing of war by taxes so that only the present generation may be penalised does not contain the whole truth.

In the same manner, it is not necessary that borrowing should shift the burden of war on the future generation. When people in the present generation subscribe to the war loan, they have to curtail their present consumption and hence suffer. The war loans, too, draw off capital from trade and industry and to the extent, that the present productive capacity suffers thereby, the burden is on the present generation.

But there is no doubt that the floating of loans does render some relief to the present generation which would have to bear the brunt of heavy taxation otherwise.

In order to see to what extent the loan shifts the burden to the future generation we shall have to consider whether the loan is a short-term loan or a long-term one and also whether it is an internal loan or external loan.

If the duration of the loan is 20-30 years then it is extinguished in the present generation. Future generation is not at all touched. Only in the case of a very long-term loan, the future generation may be supposed to bear the burden of interest payments.

If the case of an internal loan it is very doubtful if the burden is on the future generation as a whole. No doubt interest and principal will have to be paid in the future and the people will have to be taxed. The tax-payers of the future have to bear the burden. But who receive the interest payments? The sons of the present stock-holders. It simply means that wealth is transferred from some sections in the future generation (i.e., the tax-payers) to some other sections in the future generation (i.e., the bond-holders). If the future generation pays, the future generation also receives. How can we say that the future generation bears the burden of a loan? It is certainly not the case if the loan is an internal one.

But if the loan is an external one, the future generation does bear the burden of interest payments and the repayments of the principal. Wealth is transferred from the debtor country to the creditor country. There is a positive drain of wealth at the expense of posterity. This burden is light during the war and in the immediate post-war years when business is brisk, prices are high and there is no unemployment. But when the inevitable depression comes the burden is increased manifold.

We may thus sum up: To the extent the war is financed by the issue of paper money the burden is on the present generation. In so far as it is financed by taxation, the present generation suffers principally but the future generation may not escape the adverse effects of heavy taxation. Similarly, though loans have a tendency

to shift the burden on the future generation, the present generation may also be affected by the Government borrowing. If the loan is a short-term one, the future generation is not touched. But even in the case of a long-term internal loan, posterity pays posterity and posterity does not suffer as a whole. Only in the case of an external loan the burden of the war is shifted to posterity. It is only in this way that we can make posterity pay for the war that we perhaps provoked and fought.

14. Deficit Budgeting. Yearly budgets are the rule these days. But it looks so arbitrary. Why should any sanctity attach to a period of twelve months? Is it expected that just as the earth completes its revolution round the sun in a year and the new cycle of the seasons starts, in the same manner all financial operations are nicely rounded off and wound up *exactly* in a year? This is not possible. The capital productive expenditure incurred by the governments will take some years to come to fruition. At first there is a phase of mounting expenditure and there must be deficit budgets; then come a series of surpluses; but it would be wrong to attribute them to those particular years. The seeds were obviously sown some years back. It is clear therefore that instead of taking one year's period as a basis for budgeting, we should take a period of 3-5 years' for balancing the budget. In the meantime there can well be deficit budgets.

In national financing, as distinguished from individual financing, surplus budgeting is not considered a virtue. If a country is in the throes of depressions, lot of public expenditure will be required to lift it. If a country is fighting a war or a natural calamity like a big earthquake or widespread unprevented floods, a big responsibility rests on the government. Due discharge of this responsibility means huge expense. It is not the time to count costs; nice financial calculations are thrown over board. The government has to face deficit budgets and there is nothing wrong about them. The expert financial opinion has been veering round the view that the best budget is that which shows a little deficit rather than one which shows a big surplus. The former means that taxation has been reduced to the minimum and no niggardliness has been shown in appropriating funds for important national purposes. The latter, on the other hand, may mean that the government has been raising large revenue by high taxation but has been stingy in spending it.

It must, however, be emphasised that the tendency to deficit budgeting must be discouraged during periods of inflation. Surplus budgeting is regarded as one of the anti-inflationary measures.

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CHAPTER XLVIII

ECONOMIC RECONSTRUCTION

The Existing Economic System—Capitalism.

1. Outstanding Features of Capitalism. Before we can think of any alternative plan of reconstructing the economic order, it is essential that we thoroughly understand the implications and the working of the existing economic system which is known as Capitalistic economy, capitalism or capitalistic system.

The distinguishing features of capitalism, as we have already seen, are (1) private ownership of the instruments of production ; (2) their management exclusively for personal gain ; (3) freedom of enterprise and contract ; (4) class conflict : Labour Vs. Capital ; and (5) control going with risk.

Under the prevailing system nearly all farms, factories and other means of production are the property of private individuals and firms, and their unfettered freedom to use them or not to use them with a view to their own profit is recognised. The desire for profit is the sole consideration with the property owners when they deal with their property in any manner. Everybody is free to take up any line of production he likes and he is free to enter into contracts with other fellow citizens for his profit. Although all modern States do impose certain restrictions in the interest of general welfare, yet even these restrictions leave a very wide latitude for the propertied classes to use their property in any manner they like, to start any business that they think most profitable to themselves and to enter into all contracts they think necessary to advance their interests. Webb's definition of capitalism brings out the necessary implications of the system. They define it thus : " By the term capitalism or the capitalistic system or as we prefer the capitalist civilisation, we mean the particular stage in the development of industry and legal institutions in which the bulk of the workers find themselves divorced from the ownership of the instruments of production in such a way as to pass into the position of wage-earners whose subsistence, security and personal freedom seem dependent on the will of a relatively small proportion of the nation ; namely those who own and through their legal ownership, control the organisation of the land, the machinery and the labour force of the community and do so with the object of making for themselves individual and private gains."

2. How Capitalism Functions. The capitalist economy is known as a government by price. It is the pricing process or price-mechanism which makes the functioning of the capitalistic system look almost automatic. The quality and the quantity of production is determined by price. When a certain commodity or service

happens to be in greater demand its price will rise indicating to the entrepreneurs a profitable field for their productive activity. The entrepreneurs rush in to supply that commodity or service in order to take advantage of the high profits made possible by the rise in prices. Labour and capital are diverted to the production of this commodity. Increased supply will then lower the price, which will then warn off the prospective entrepreneurs. Thus the nature and volume of production is indicated by the price.

Price also rations out the available supply of commodities among the various uses. If the supply is less than the demand, price rises and puts off the consumers whose demand is less urgent. In case the supply is abundant the price will fall so that the entire supply is carried off the market. Price thus brings about an equilibrium between the demand for and the supply of a commodity.

It is through the pricing process, again, that the available productive resources of the community are diverted into the most remunerative channels. The price of labour is the wage, that of capital is interest and that of land rent. Wherever the wages, interest and rent are high, the factors will have a tendency to move there. Without price mechanism it is difficult to see how the limited resources of the community could be put to maximum advantage. Price is the universal and an automatic indicator. "No far off economic Czar could wield any more impersonal or ruthless control over what shall be produced than does the price system."¹

The prices are ultimately paid by the consumer. The consumer is, therefore, the final authority. It is his judgment that decides what should be produced, where it should be produced and at what price should it be sold. It seems that the productive resources of the community are being used according to the isolated and uncoordinated decisions of the numerous body of entrepreneurs. But the fact is that these decisions are really governed by the scales of preference of an unorganised and even more numerous body of consumers. Every entrepreneur seeks to give the consumer maximum satisfaction for only in that way he can gain maximum profit for himself. "Profitability and productivity are identical."² Under the existing system there is no centralised control or conscious or deliberate direction of economic activity. The working is planless but the consumers' preferences when translated into effective demand by price somehow make everything fit in with the other properly. "Considering the fickleness of the public, the rapid vogues of styles and fashions and their even quicker oblivion afterwards, we may well marvel at the smoothness with which natural resources are worked up and made available for human use"³

3. Achievements of Capitalism. The supporters of capitalism point to the rich variety and abundant supply of goods and ser-

1. Moore and others—Modern Economics, p. 471.

2. Hayek quoted by Brij Narain—Principles of Economics, 1945, p. 445, (S. Chand & Co.)

3. Moore and others—Modern Economics, pp. 471-72.

vices. The lure of profit compels the entrepreneurs to take risks, to conquer new fields and supply something which the consumer would like most. Standard of living has risen, comforts of life have increased and the life has become richer and fuller. This is the service of capitalism to society.

Secondly, the limited resources of the community are put to most economical uses with as little waste as possible, for the person responsible for the waste receives prompt punishment for his miscalculation in the form of losses and bankruptcy.

Thirdly, the richest reward under capitalism goes to the ablest, the most daring as well as prudent entrepreneur. A man who takes the initiative and shows an extraordinary resourcefulness and responsibility makes the highest profits. Nothing seems to be more just than that the rewards should be apportioned according to merit.

Fourthly, the consumers' control gives the system a democratic tinge. Nobody likes that his consumption should be dictated by some superior authority. In the capitalist economy an attempt is made to adjust production according to the consumers' wishes and not that the consumers have to consume what is supplied to them.

Fifthly, under capitalism control goes with risk. The capitalists whose stake is the largest, control the industry themselves. Nothing can be fairer than that.

Finally, if survival of the fittest is any criterion of the soundness of a system, then capitalism is indeed sound and strong. So many crises have overtaken the system, but it somehow emerges, a bit crippled no doubt, but victorious. Its adaptability to the changing economic conditions is indeed surprising. What greater proof do we need of its toughness and resiliency that the system has stood the strain of a war like the recent one tolerably well?

4. Criticism of Capitalism. First, competition which is the cardinal feature of capitalist economy is a sheer waste. Colossal expenditure is incurred in advertisement and salesmanship simply to beat a rival. Resources employed by those who are defeated in the race go to waste. Cut-throat competition does not confer any corresponding social benefit.

Secondly, mobility of the factors which is essential to rectify most adjustments in the economic system is based on the efficiency of competition. But existence of friction, legal, social and economic, hampers free competition with the result that the factors of production often lie idle and the consumers do not get proper satisfaction although the entrepreneurs are enriching themselves.

Thirdly, the supposed harmony between the interests of the consumers, i.e., the society, and those of the producers does not actually exist. Lack of free competition, deliberate deceit practised by unscrupulous producers and the ignorance and the impotence of the

individual consumer turn the consumer king into an abject slave, a victim of exploitation.

Fourthly, the recurrence of the trade cycles due to over-competition and over-saving leading to over-production must be considered one of the bitterest fruits of capitalism. When production is unplanned and is being augmented by ever-increasing accumulation of capital, whereas the bulk of the consumers are being impoverished more and more, it will be a miracle if there can be a proper balance between production and consumption.

Fifthly, the workers who constitute the bulk of the nation have to live under a perpetual dread of dismissal. They have no sense of security.

Sixthly, capitalism lays undue emphasis on property rights as against human rights. Man, the first of God's creation, is treated like an ordinary chattel.

Seventhly, capitalism has sown the seeds of eternal social unrest by dividing the society into two hostile camps, labour and capital, who look sullenly at each other and are ever on the look-out of an opportunity of a fight.

Eighthly, the extreme inequality of wealth distribution and the inequality which is being accentuated as time goes on, is the most galling outcome of capitalism. As G. D. H. Cole remarks, "There is a world of difference in terms of happiness between the high priest and the slaves in the temple of industry."¹

Finally, capitalism is full of most mortifying anomalies, the few indulging in all-conceivable luxuries and the majority living under semi-starving conditions; the crops rotting while human beings are starving; inside the factories machines are lying idle or are undermanned, whereas unemployment is raging in all its fury outside. These few points constitute a sufficient indictment of the present system. Ruthless exploitation of women and children, callous disregard of the aged, the sick and the unemployed and mercenary motives mainly governing human relations have all pricked the social conscience, and people are furiously looking round for alternatives to capitalism.

As an escape from intolerable conditions prevalent under capitalism, the chief alternatives suggested are: Planned capitalism, Socialism including the Communist plan and Fascism. We turn now to consider these alternatives.

5. Planned Economy. Since the last economic depression in which the world witnessed an unseemly and unusual spectacle of starvation in the midst of plenty, the world has increasingly become planning-minded. It is no longer considered safe to let the economic system function automatically according to demand and supply. The danger of chronic maladjustment is inherent in the present system. Few people now expect that left to themselves the economic forces would bring about an optimum distribution

¹ Cole, G. D. H.—Principles of Economic Planning, 1935, p 3.

of the economic resources of the country to the maximum social advantage. As Sir William Beveridge remarks, "It is no more likely that the individualistic growth of many small separate businesses will produce an industry laid out on the lines of maximum overall efficiency, than it is likely that the disorderly, uncontrolled activities of innumerable small property owners and builders will produce a planned town without needless corners, duplicate streets and traffic congestions." Planning is especially advocated for preventing the recurring maladjustments which generate a trade cycle under the present economic system.

But what is planning? There is a lot of confused thinking on the point. As Robbins says, "Strictly speaking all economic life involves planning.....To plan is to act with a purpose, to choose, and choice is the essence of economic activity."¹ But this is not the sense in which the term planning is generally used. Nor does planning mean rationalisation of industry or reorganisation of agriculture. In India the various departments of the Central, Provincial and State Governments have prepared schemes for post-war development. This is also planning in a sense, planning ahead. But such schemes do not convey quite accurately the essential idea underlying economic planning. Planning as understood by economists, implies centralised control and conscious and deliberate layout of the national resources with a definite end in view, all the economic aspects being definitely integrated and co-ordinated so that all duplication and senseless competition may be eliminated. Lewis Lorwin defines planned economy as "a scheme of economic organisation in which individual and separate plants, enterprises and industries are treated as co-ordinate units of one single system for the purpose of utilising all available resources to achieve the maximum satisfaction of the people's needs within a given time."² Or as Dickenson puts it: "Economic planning is the making of major economic decisions—what and how much is to be produced, and to whom it is to be allocated by the conscious decision of a determinate authority, on the basis of a comprehensive survey of the economic system as a whole."³

The essentials of planning which emerge from this conception are :—

(a) That it is to be conscious and deliberate with a definite aim.

(b) That there must be one single undivided authority which is responsible for planning and co-ordinating the various economic activities ; delegation of functions is not ruled out.

(c) Planning must be of the entire economic field and not merely piecemeal planning.

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1. Robbins, Lionel—Economic Planning and International Order, 1937, p. 4.
 2. Quoted by George Frederick in his "Readings in Economic Planning, p. 153.
 3. Dickenson, H. D.—Economics of Socialists, 1939, p. 41.

(d) That the available resources are to be scientifically distributed with the sole object of general welfare.

Planning has crossed the realm of merely academic discussion and has become an essential plank of practical policy. The N. I. R. A. (National Industrial Recovery Act) of June 1933 gave the U. S. Government a sweeping control over the various aspects of production. Nobody doubts the success of this measure. Planning has been even a more splendid success in Russia which has given her a first place in Europe and a second place in the world in industrial production. In Germany, too, where there was no State ownership of capital, planning removed unemployment, raised wages and developed agriculture. Without planning Germany would not have shown such a wonderful recovery.

6. Economic Planning in India. Several plans were put forward in India. The first, the most comprehensive and carefully thought out is what has been popularly called the Bombay Plan produced by eight top Indian industrialists. The plan aims at trebling the present *per capita* income in 15 years which, making an allowance for the increase in population in the meantime, will only mean the doubling of the *per capita* income. It has fixed targets to hit so far as production is concerned, viz., increasing industrial production 500%, agricultural production 130%, income from services 200%. It aims at providing every Indian a balanced diet, 30 yards of cloth per head, a reasonable housing accommodation and fairly adequate educational and medical facilities.

Then, there is the "Peoples' Plan" or the Royist Plan. It is more liberal in granting the necessities of life but it is doubtful whether the various details have been carefully and scientifically worked out.

A plan known as the Gandhian Plan prepared by Principal Aggarwal seeks to translate into practice Mahatama Gandhi's views about production and standard of living. It is based mainly on the development of village industries and excludes mechanisation.

The Government of India and the Provincial Governments have prepared their own plans. Not only do we need a good plan but a proper atmosphere for its successful execution and also an honest and efficient execution. There must be cordial relations and full co-operation between the Government and the people.

It seems necessary to emphasise that the main aim of planning should be the raising of the standard of living of the masses. Therefore planning should not merely concentrate on efficient production but also equitable distribution. A comprehensive economic plan for India should cover reorganisation of agriculture, development of industries, means of communication and transportation, stabilisation of banking, marketing, foreign and internal trade, integration of agriculture and industry, etc. To bring about a rational distribution of wealth reforms in the system of taxation will also be necessary. Social legislation providing social amenities to the poor will have to be passed.

Planned Economy can co-exist in any form of economy. Even under capitalism, planning is possible. All the paraphernalia of capitalism, viz. private property, individual initiative and enterprise, may be permitted but a much greater State control will be necessary. All entrepreneurs will have to work under the plan. From the very nature of things, planning under capitalism can have only a limited success. It is also possible that there may be socialist economy without any pre-conceived and conscious plan. Economic policy may be one of drift. But planning, if it is to be on a sure and stable footing, involves some form of socialism.

7. Socialism. Socialism, as an alternative to capitalism, has the widest appeal. A Swedish king remarked to his minister, "If one is not a socialist up to the age of twenty-five, it shows that he has no heart; but if he continues to be a socialist after the age of 25, he has no head." Socialism seems to have caught the imagination of youth all the world over.

But there is no complete agreement as to what socialism exactly is. It seems there are as many types of socialism as there are socialists. Socialism has been compared to a hat which has lost its shape because everybody wears it. An acquaintance with different schools of socialists will be helpful in understanding the essentials of the socialists' plan.

8. Marxian Socialism or Scientific Socialism. Karl Marx, who wrote his book *Das Capital* in 1867, the bible of socialism, is considered to be the father of scientific socialism, as he tried to put the theory of socialism on a scientific basis. The chief points in his theory are:—

(1) *Materialistic conception of history.* He seeks to explain every event of history on economic grounds. He gives an economic interpretation of history. All wars, riots and political movements have their origin in the economic factors. An appropriate political organisation corresponds to an economic stage. A capitalist economy, for example, will evolve a system of Government which perpetuates and supports property rights.

He goes on to explain how capitalism will generate conditions which will replace it by socialism. The capitalists will grow in wealth as time passes, but will become fewer and fewer, the bigger whale swallowing the smaller one. Monopolies will be created, production will expand necessitating scramble for markets abroad. This will lead to an imperialist war, and one war will be followed by another more terrible than the preceding one till capitalism perishes in the conflict and the dictatorship of the proletariat will be established.

(2) *Theory of surplus value.* Karl Marx says that the manufacturer gets for his commodity more than he has spent on labour and other costs. The excess of market value over the costs is the surplus value. This surplus is the creation of labour. It is created

because labour is paid much less than is due to it. He characterises the appropriation of the surplus value by the capitalist as robbery and exploitation. A commodity is simply crystallised labour or congealed labour.

9. Collectivism or State Socialism. The collectivists or the State socialists believe in parliamentary democracy and nationalisation of the means of production. They want to strengthen the political machinery, capture it and use it for the realisation of the socialists' aims and ideals. The powerful State engine will be utilised in production of wealth and its equitable distribution. State is to be all-in-all, and as soon as the socialists have captured it, they have reached the goal. The State will do for them all they want. Private enterprise will be put an end to. All production will be carried on by salaried State officials and profits will go to the State coffers and utilised for the uplift of the masses. The only difference between capitalism and State socialism is that under the latter means of production are owned and managed by the State instead of the private entrepreneur, otherwise the exchange mechanism of capitalism, e.g., pricing, marketing, etc., is retained.

10. Guild Socialism. The guild socialists start with a distrust in the State. They do not consider, as the collectivists do, that the State can efficiently run the productive machinery. According to the guild socialists the capitalists are to be expropriated. But the farms, factories and other instruments of production are to be handed over to the worker's guilds who are competent to organise and manage production efficiently. In other words there is to be self-government in industry. The State will simply supervise and act as the representative of the general body of consumers in fixing the price and looking after the quality of the goods produced.

The essential idea is that the ownership of the means of production is to be vested in the State but their actual operation is to be entrusted to the workers themselves. The State is simply to see that the consumer is not exploited or defrauded. They seek to do away with the evils of too much centralisation and the inefficiency of the bureaucracy in business. They claim that the decentralised system they propose to set up will ensure both real democracy and efficiency.

11. Syndicalism. Like the guild socialists, the syndicalists, too, do not believe in the efficiency of the State as an instrument for the realisation of the socialists' ideals. The State official, whatever the class to which he belongs, has a typical *bourgeois* mentality. He can never understand what the worker wants. He is in the habit of bossing over others. The syndicalists, therefore, are opposed to the strengthening of the State inasmuch as it will create so many petty tyrants. They propose to build up social, political and economic structure on a network of trade unions.

They do not believe that they can realise their aims through constitutional means. The State officials are too powerful. They believe in direct and violent action. Strike is their chief weapon.

Even if the strike fails, it teaches the workers much useful lesson in the economic warfare, it builds up workers' solidarity and sharpens their hatred for the capitalists. This hatred must not be allowed to cool. They advocate strike after strike and then at the end, a general and prolonged strike till the political machinery is paralysed and they are able to capture power. The syndicalists lay stress on the destruction of the existing structure and keep deliberately vague the post-revolutionary structure of society which they want to create. Their methods are destructive rather than constructive.

12. Communism. The present-day Communism, as is clear from the Communist manifesto of 1845, refers more to the theory of the method for realising their ends rather than the society they wish to create. The Communists lay stress on the formation of a network of Communist organisations all over the country and the world, capture the key posts in other organisations and carry on their work silently adding to the number of adherents. When the party has become sufficiently strong then it will throw out the capitalists, capture governmental machinery and lay the foundation of the proletarian State. The State machinery will be utilised to crush all opposition and to expropriate the capitalists. The aim will be to create a classless society where there is no distinction of high or low, rich or poor. Having achieved its objective, the State will become unnecessary. It will 'wither away.'

As for the type of structure of society which the Communists envisage some idea can be gathered from Plato's Republic or Wells' New Worlds for Old. The Communists propose to abolish all forms of private property, not merely in the instruments of production but also in the consumers' goods. People will work according to capacity and get a reward according to need. Everybody is assigned a definite job. He cannot choose his own occupation. No-body will have a house of his own or a bank account. Everyone will be a Government employee; he will not be paid cash but he will get his meals in the State kitchens and live in State quarters. He will be provided commodities and services for consumption by the State not of his choice but what the State chooses to give according to production at the time. The bringing up of the children, their education and fixing up will be State concern. The pricing system will disappear. The State will control production, assign jobs, fix remuneration and prices of goods and services without profit motive. A very alluring dream indeed! In a Communist society there cannot be a commercial crisis, unemployment, no distinction between rich and poor and no strife between labour and capital. The idea is obviously Utopian. The Russians in the early stages of their Revolution tried to put these ideas into practice, abolished money and exchange. But the system failed: Money economy had to be restored and price-mechanism revived. Different wages were paid to encourage and reward efficiency.

13. Anarchism. The Communists' ultimate aim is to bring about a structure of society in which State has ceased to exist. It

has 'withered away.' By anarchy in ordinary language we mean misrule, disorder, etc. But according to socialist nomenclature it means negation of Government because it is unnecessary. The Communists hope that when the world has been purged of capitalism, greed, selfishness, aggressiveness, deceit, etc., will disappear and in their stead self-sacrifice, service of others, virtue, sympathy, an attitude of give rather than take will come to prevail. Man will have been so much uplifted by then that police will be unnecessary. Courts of law will be superfluous. Is it surprising? Fahein reported about ancient India that there were no thefts and robberies and people did not lock their houses. So anarchists dream may be realised after all.

The social and economic life will be organised in autonomous bodies or associations and they will, through voluntary agreements, regulate their affairs. Each will respect the rights of the other and hence there will be no difficulty. The Government is to be like the policeman on traffic duty. When for certain hours during the day, the police man is away the traffic regulates itself. Exactly in the same way the society will function. Another sweet dream! We owe this to Prince Kropotkin. According to anarchists, State is only needed to protect property or unjust gains of the capitalists or their ill-begotten wealth and plunder. When this goes the State goes with it.

14. Fabian Socialists. These socialists are men of literature like Bernard Shaw and so many others in England who sincerely believe that socialism is a question of conviction. If the people can only be convinced of the virtues of socialism, no power on earth can prevent its coming about. Through literary propaganda—novels, dramas, short stories—they carry on incessant struggle against capitalism and bring out the merits and the necessity of socialism. It is hoped that in course of time the world will come to believe in socialism and socialism will then without much difficulty come to prevail. They may not be wrong. The English people have come to believe in socialism. They have placed the Labour Party in a strong position to carry out their socialist programme. The weakness of the ministry itself may stand in the way, otherwise the country has given them a clear mandate to go ahead. There will, of course, be squealing from the vested interests but the majority of nation apparently wished them god-speed.

15. Evolutionary and Revolutionary Socialists. This is a division on the question of the method. The revolutionary socialists believe in a revolution. The path of evolution, they say, is long and uncertain. Who can wait so long? The evolutionary socialists think that no permanent achievements can be made by revolution. During the revolution such people manage to capture power who are ruthless, aggressive, unscrupulous, selfish and fond of power. Revolution throws everything in the melting pot and you do not know what will come out of it. The results are always disappointing and the clock of progress set back. French Revolution did not produce 'liberty, equality and fraternity' but a reign of terror.

16. Socialists of the Chair. These persons are socialists by conviction. They are generally professors of Economics and Political Science, rather doctrinaire than practical. They have unparalleled opportunities of propagating socialist ideas.

17. The Essentials of a Socialist Scheme. We have made a very rapid survey of the various shades of opinions among the socialists. In spite of these divergences of opinion, in some cases very acute, it is possible to visualise a scheme to which the majority of the socialists would pledge their support. They all believe in abolition of private ownership in the instruments of production. Land, factories, railways, mines and every other means of production must be nationalised. Their ownership and control are to be vested in the State. So that the State provides work for everybody. There is to be no private enterprise. Production is to be initiated and conducted by the State which will pay wages and other costs and appropriate profits. Interest and rent as payments to capitalists and the landlords will disappear, for the State is the capitalist, the landlord and the entrepreneur. All socialists, except the Communists, are prepared to allow private property in the form of a house, furniture, household equipment and other consumers' goods.

Living on unearned income is to be discouraged. Remuneration for work is to be according to the nature of work and is not equal. It will vary according to ability. A limited operation of the law of demand and supply in this connection is envisaged. There is thus no basis for the belief that under socialism all would be equal economically. No economic equality is guaranteed. What can be assured is equality of opportunity for all irrespective of rank. The State is to help a man to choose an occupation and make him fit for it.

The State is the authority in charge both of production and distribution. The allocation of the productive resources of the community will be determined according to the direction of central authority. The profits of production instead of going into the pockets of a few private individuals go to the coffers of the State and are supposed to be spent in ameliorating the lot of the poor man by providing him, his family and children adequate medical and fuller and free education and ampler means of recreation and entertainment. Freedom from want is guaranteed and fear born of insecurity is to be banned. Everybody is to be free to select his occupation and free to spend his income in any manner he likes. There is no regimentation. This, in short, is the socialist plan.

For a long time definition of socialism as given by Webbs was accepted by the majority of the socialists. Their definition runs thus: "A socialised industry is one in which the national instruments of production are owned by public authority or voluntary association and operated not with a view to profit by sale to other people, but for the direct service of those whom the authority or association represents." This definition does not correspond to the present notion of socialism, because it does not imply any idea of planning.

The definition given by Dickenson, therefore, seems to be better. According to him Socialism is an economic organisation of society in which the material means of production are owned by the whole community and operated by organs representative of and responsible to the community according to a general plan, all members of the community being entitled to benefits from the results of such socialised planned production on the basis of equal rights¹

18 Case Against Socialism The critics of socialism claim to pick numerous holes in the socialist fabric. Apart from some silly objections, which have been exploded since long, *e.g.*, socialism would ban religion, abolish marriage and family, dangling of Malthusian bogey to frighten the simple and ignorant minds, earnest efforts have been made to understand socialism and to point out some real dangers and difficulties.

The most important set of arguments advanced against socialism is the one against bureaucratic running of the economic machinery. Bureaucracy is considered to be inefficient in running a business. The civil servant does not feel the same keen self-interest as the employee of a private corporation whose tenure is not so secure. The civil servant knows he will get promotion according to seniority; no amount of alertness or extra work is going to push him up in the graded list. His main concern is let the things go on somehow without a positive breakdown. One thing he wants to avoid is public criticism. He will, therefore, take no bold risks and will be content with a moderate measure of success being guided by rule and precedent merely. Initiative and resourcefulness are at a discount. The business policy will be timid and unenterprising. There is routine and red-tape, a place for safe man of mediocre calibre and no room for extraordinary and dashing spirit. No first-rate work can be done by second-rate men. Such men are not fitted to achieve any remarkable success in business. A Government department cannot claim to score success in business where rapid decisions have to be taken and bold policies are called for. The Government personnel is not such which can conquer fields anew. The Government can, and does, attract able men but conditions in Government service are not congenial for the show of an extraordinary ability. The reward is not considered worth the trouble. All the defects of company management are magnified considerably. Bureaucracy will further mean bossism and loss of individual liberty, gestapo, etc.

It is also urged that Government cannot secure the huge amounts of capital which will be necessary for the efficient running and expanding of all industries and trades.

Under socialism there will be no automatic indicator for the most economical allocation of the resources of the community among different industries. Under capitalism there are consumers' preferences which through price-mechanism bring about an optimum distribution of these resources. Therefore under socialism it will be all groping in the dark. Some commodities will be

1. Dickenson. H. D.,—Economics of Socialism, 1939, p. 11.

produced in excess and wasted and there may be a shortage of others resulting in unsatisfied demand. A chronic maladjustment in demand and supply is feared. The task of organising production, of allocating every acre of land to its proper use, to set every worker on the right job and to invest every rupee in the direction of maximum efficiency is too big to be performed by any single authority.

Under capitalism the consumer enjoys sovereignty. Of course, this sovereignty is limited by his income, existence of monopoly, etc., yet the domain is wide enough for him to pick and choose. But under socialism he will lose this sovereignty altogether. Consumption will have to adjust itself to production. This loss to the consumer is a real loss. He will not be able to maximise his satisfaction. Socialism always, therefore, means hardship, sacrifice and privation for the consumer. The State will no doubt fix the prices but it will be all arbitrary. The price fixation will be rigid and will lack the resiliency of market mechanism, which is sensitive to even the slightest change in the consumers' preferences.

It is also feared that incentive to hard work and stimulus to self-improvement will disappear altogether when personal gain or self-interest is eliminated. People will not give their best. Inventive ability, enterprising spirit and the go-ahead attitude will languish, and creative work will become impossible. It is remarked that "a Government could print a good edition of Shakespeare's works, but it could not get them written."¹

Another charge against socialism is that with the freedom of enterprise disappears even the free choice of occupation. Workers may be assigned certain jobs and they cannot change without the consent of the planning authority. Otherwise the plan may be upset. Every worker is dovetailed in the scheme and he must keep there. This loss of freedom may be really galling.

Some people have been disappointed in socialism, because in Russia, where it has been in operation, it has failed to bring about an economic equality. The difference between the rich and the poor is still there. The dream of a classless society is far from being realised. The workers under capitalism, *e.g.*, in America and England, are not so worse off. They enjoy a higher standard of living. People are not convinced that under capitalism poor go on becoming poorer. The rich are no doubt getting richer but the lot of the poor is also undoubtedly improving. So some degree of scepticism in the efficacy of socialism as a panacea of all social ills has grown and damped the ardour of some enthusiastic socialists.

That under socialism there is no unemployment is conceded but the critics retort there is also no unemployment in a jail. They regard a socialist State as one big prison-house and do not think employment is any compensation for loss of liberty.

It may also be pointed out in the end that Marxian socialism is not so scientific after all. Labour is not the only cause of value and has not the sole right to its appropriation. Few are convinced of the accuracy of Marx's materialistic interpretation of history. Economic motives are no doubt the strongest but they are not the only ones to sway human sentiments.

19. Answer to Critics of Socialism. This looks a formidable array of arguments against socialism but it is not so formidable as it seems. The strength of socialism lies in the proved evils of capitalism. The world is periodically plunged into depression causing so much dislocation, unemployment and suffering. Capitalism has not been able to ensure stable trade conditions. National resources have been exploited for personal profit. Human beings, especially women and children, have been used as so many machines simply to enrich the capitalists. Who can help hearing the 'Cry of the Children'?

how long, O cruel nation,
Will you stand, to move the world, on a child's heart,—
Stifle down with a mailed heel its palpitantion,
And tread onward to your throne amid the mart,
Our blood splashes upward, O gold heaper,
And your purple shows your path ! (Elizabeth Barret Browning)

The social conscience feels outraged at the sight of a poor family working the hardest, not getting sometimes two square meals a day, dressed in rags, living in dirty cells and children dying because they cannot buy medical aid or milk. On the other hand, the rich are rolling in luxuries, their horses and dogs are better fed and housed than their fellow human beings. They perhaps think the poor man is not after all a human being ; he is some other specie. A system which produces such iniquities and callousness stands self-condemned.

Look at the alternative. Socialism bans trade depression and removes unemployment which under capitalism always hangs over workers' heads like Democles' sword. A great worry is off. Free choice of occupation under capitalism is a farce. Who can really choose his occupation ? The choice is limited by his parents' means and influence. Sometimes a man would like to get any work that he can. But there is no work. Capitalism regards him a part of the scrap heap. Who would not like to be put on to job compulsorily rather than face enforced unemployment and starvation ? A socialist State provides permanent and pensionable job for every body according to his aptitude and capacity.

A socialist State can allocate the resources of the community among the various uses with the sole consideration of social security and welfare. Consumers' wishes have to be replaced by higher social valuations. It is possible that at one stage there may be a shortage of consumers' goods but this is deliberately done in the of the society taking a long range view. Surely there is a temporary sacrifice so that we or our children

may be able to enjoy better standards later. Only a socialist State can build up a solid foundation for the country's strength and prosperity. The policy of a capitalist economy is a short-sighted one guided by the immediate gains of the entrepreneurs.

Under socialism vast funds can be devoted to the expansion of education of all types, provision for adequate medical facilities, rationalisation of industry and reorganisation of agriculture. The result is that human and material resources of the nation are immensely improved. The socialist State can easily find vast sums because the profits of industry, which under capitalism go to enrich the already rich and surfeited, are pooled in the State treasury. Many things the consumption of which is considered essential for health and efficiency may be supplied free or much below the cost. No doubt consumption is regimented and it is curtailed in certain directions, yet there need be no hardship, for it may be expanded in some other and more desirable directions. A socialist State can provide free milk for children, free nursing, free education and free medical aid. It can give free cinema shows for the workers and provide for them swimming baths, recreational clubs, free railway passes to week-end resorts and light refreshment in the factory gratis. But a capitalist only looks to his dividend. Such things are impossible in a capitalist economy, where lure of the lucre rules.

Production of all types can be immediately increased by a socialist State. The achievements of Russian five-year plans are a standing monument as to what can be achieved by people who not long ago were illiterate, ignorant, backward, conservative and poor peasants. Russia, too, like us was a country of small farmers almost all illiterate. Now there is nearly cent per cent literacy and in production Russia has beaten every other European country which started in the race of industrialisation nearly one century ago. This is due to the fact that it is only in a socialist State that planning can really be effective. We have seen that in the war there was no unemployment and production figures have shot up to a level which would have staggered not long ago. This is all due to the fact that all phases of economic life are under the central State direction. A socialist State does exactly the same thing in peace times. It mobilises all the resources of the community in the most effective manner. Dangers of bureaucratic management have been exaggerated. There is a lot of red-tapism in a company management even under capitalism.

A socialist State can also regulate the credit and banking operations so that financial maladjustments are eliminated.

As for incentive to hard work, a socialist State can, by persistent propaganda and through instruction in the educational institutions change the psychology of the people and create new scales of values. It can offer production bonuses so that every worker does his best. Who will do the dirty and disagreeable work? The socialists' answer is that most of it will be done by machinery. Machinery is not being put to such tasks now simply because man is cheaper than

machinery. Thousands of semi-starving people are available under capitalism to do such jobs on a small wage, because capitalism has impoverished the masses to such an extent. But a socialist State, not working for profits, will be in a position to relieve man from all dangerous, dirty and degrading jobs.

Socialism may not be able to make every body economically equal. This is due not to the lack of organising ability in a socialist State. The cause lies in the innate inequalities among human beings. Nature does not make everyone alike. Every one is endowed with varying degrees of intelligence and working capacity. No State can help it. It is not a matter for legislation. But a socialist State can discover the aptitude and ability of each citizen and develop it further by training and education, so that every citizen is enabled to make his best contribution to the welfare of the State. Real worth will not be allowed to be suppressed or depressed by poverty. The socialist State can pick up genius even from the lowliest of families and provide it with fullest facilities and opportunities. If, therefore the attainment of economic equality is not considered feasible, at least equality of opportunity can be assured to each and this is no mean achievement. There can also be a considerable levelling up of the masses.

The balance seems to be heavily tilted in favour of socialism.

20. Progress of Socialism. Pigou remarks, "If we take as our representative of capitalism the actual economic arrangements ruling in this country now and leave socialism a vague concept, we are tilting the balance against capitalism. For we are setting a nude figure, with all its blemishes patent to the eye, against a figure, that is veiled."¹ But figure is no longer veiled. There was a time when socialism was only to be found in books like More's *Utopia* or Plato's *Republic* or was sought to be put into practice by idealists like Robert Owen. Small communistic societies, e.g., Harmony, Oneida Community, etc., were established. But the founders were bitterly disappointed. They were just a few oases of socialist brotherhood in the vast desert of competitive capitalism. They existed within the capitalist States which maintained law and order. The modern socialist wants socialism to be all-inclusive in a country and no small patches scattered hither and thither.

Socialism has now emerged from the utopian embryo. It is no longer a matter of economic theory but has taken its stand on practical politics. The Communist manifesto of 1848 created a sensation by its clarion call for a union of all the workers of the world. It called for a revolution and said that the workers had nothing to lose except their chains and they had world to win.

Since then socialism has been winning adherents all over the world. Jewish refugees from Germany established in Cyprus several communities run on socialistic lines. Spread of socialism has been

1. Pigou—Capitalism and Socialism.

phenomenal in recent times. In the German elections of 1919 the socialists secured nearly 50% votes. Nearly one-third of the British electorate in 1924 voted for the Labour Party, in 1935 the percentage rose to more than 40. In 1945 they have returned them with a solid majority. In France more than one-third of the Deputies in 1936 were of socialist views. Spain had a socialist Government which was ousted by General Franco through an unholy alliance with Hitler and Mussolini. General Franco's throne is again shaking. The splendid success which has attended the Russian arms in the recent war and the way they turned back Hitlerian hordes as no other nation could, has won the unstinted admiration of the world. Its necessary consequence is that almost all European countries have gone 'red'. The Governments in Italy, Bulgaria, Yugoslavia, France, Austria and Poland have all socialistic leanings.

In the East, in China, the Communists have a parallel Government of their own. Thus in the East as well as in the West the gospel of socialism is finding a ready response.

Indian intelligentsia, youth and leaders like Pt. Jawahar Lal Nehru actively believe in some form of socialism. There is nothing to fear. The movement need not be a sudden revolution accompanied by all the horrors that a revolution brings, but the change can be gradual and by peaceful means. All socialists do not believe in revolutionary and abrupt changes. For a long time all thinking elements have been everywhere in favour of increasing nationalisation of the principal means of production. All the monopolies can without any remorse or provoking a protest be nationalised. When an industry has become set and has been reduced to a routine, private enterprise is really out of place, and it should be taken over by the Government so that the profits can be secured for the community in general. Proper sphere for a private enterprise is in new industrial fields, where initiative counts the most.

The credit for creating enthusiasm for socialism belongs to Russia. It will not be out of place if we note a few facts about the Russian experiment.

21. The Russian Experiment. The Russians made their 'Red' Revolution even before World War I had come to a close. The leaders of the Revolution inspired by Marxian doctrines of socialism started with a revolutionary programme. Capital and land were nationalised without any compensation. 'Kulaki,' the rich landlords, were sent into exile. Production and distribution were completely centralised and money wages were abolished.

But the system did not work. Lenin in 1921 introduced the new economic system which has been called a strategic retreat. The leaders realised that they had overshot the mark. Thus followed a policy of compromise. Private ownership in land was recognised to a limited extent and private farming was allowed side by side with collective farming. Private enterprise in trade and industry was also permitted alongside with State enterprise. Instead of

whole-hog Communism, a practical sort of State capitalism was created. Thus a variety of industrial and trade organisations grew up consisting of purely State undertakings, mixed State and private undertakings and those which represented leases and concessions to the private entrepreneurs from whom the State received royalties. Money wages were also restored.

During the early years of the Bolshevist era, poverty and misery reigned. The volume of production had shrunk to a fraction of the pre-war figures and the standard of living had considerably fallen. But work of rehabilitation was going on and by 1927 the pre-war levels were touched. In 1928 was inaugurated the first of the five-year plans which fixed targets for agricultural output and heavy industry. Policy of collectivisation was vigorously followed. Good-sized farms were created. Loans were advanced and machinery placed at their disposal. There was an enormous increase in agricultural output. It was nothing short of an agricultural revolution. In 1933-34, however, the pace of collectivisation was slowed down and individual profit making was permitted to some extent. Stalin followed a very realistic policy. He made a full use of human psychology which desires power, influence, fame and reward. Badges of honour were awarded to industrial leaders, bonuses and prizes were given for more efficient work. A spirit of rivalry and emulation was introduced among the various industrial groups and the whole thing was changed into a game where the team or group worked for honour. Production was speeded up and under the direction of Gosplan (Planning Commission) the targets were hit. When semi-civilised, illiterate peasants who had never known how to work in a group were put into a new system, the civilised world looked derisively at Russia but when the first plan achieved its aims, it stood aghast. The tractor plants, the machine-making tools, automobiles and other heavy machines came out of the factories like mushrooms.

The second plan paid more attention to the production of consumers' goods. In 1919 the number of tractors and combines produced was 34,900 and 45 respectively but the corresponding figures in 1930 were 470,000 and 137,800, respectively. The output of electricity rose from 5 billion k.w. in 1928 to 38 billion in 1937. The rail-road mileage was 50% more in 1937 as compared with 1923. Illiteracy during two decades was reduced from 67.7% to 8%.¹

Few countries can show such a dazzling record of achievements with such a poor human material. The Russians are enjoying a standard of living which they could not even dream of in the Czarist regime. No doubt it still compares unfavourably with other European countries. But Russia is still in the building-up stage. They had hardly completed their plans when they had to wage a war unparalleled in human history and they had to bear the brunt. Had this war not intervened they would have added a big bunch of feathers on their cap.

1. Moore and others—Modern Economics, p. 469.

The organisation of the Russian system is based on a network of soviets (councils representing occupational and industrial groups) scattered throughout the length and the breadth of the country in rural as well as urban centres. These are knit into congresses which in their turn are federated into a supreme congress, the highest authority in the land. As it is too big a body, it functions through a central executive which is a bicameral organisation. Below it there is the Presidium, a legislative body consisting of 21 members and a council of peoples commissars which is a smaller body and is mainly an administrative organ like the Indian Executive Council or the British Cabinet.

22. How Russia Tackled Economic Problems. It will be of interest to know how Soviet Russia has tackled the various economic problems :—

Private property. Private property in a house, a car, a few animals and other consumers' goods is allowed. A man is free to buy Government bonds or securities or he can keep a deposit in the bank. Property of the amount of 50,000 roubles can be transmitted by inheritance. But living on unearned income is discouraged and all unearned income is subjected to very heavy taxation.

Pricing system. Some economists notably Mrs. Hayek and Robbins are of the opinion that rational accounting is impossible under a socialist regime and that it is all groping in the dark. Misses regards socialism as a rational economy. But there are other economists like Pigou who do not see any difficulty in this. Dickenson, too, is of the opinion that the capitalist apparatus of marketing and pricing can be retained in socialism. Russians have been able to fix prices of the goods produced. Costs of raw materials and wages, transport and all other costs are added and then a small % for a little profit. This gives a selling price. It is a little arbitrary and prices do not reflect intensities of consumers' demands, although some note is taken of the relative scarcities.

Supply of labour and wages. Labour had sometimes to be conscripted. But there are now ample facilities for technical training. Government is even prepared to bear the cost of training on the condition that the trainees after completing training, work in Government factories for four or five years on terms settled beforehand. Money wages are paid and there are variations according to ability, efficiency and nature of work. Standard wages are fixed after a thorough motion study and time study in order to ascertain the standard time required for a job, and efficiency premiums are given to better workers who take less time. If there is a comparative shortage of some type of labour, higher wages are of course offered to attract the right type and sufficient supply of labour. Workers are assigned definite jobs and they are not allowed to leave without the permission of the higher authorities. This restriction on mobility is considered essential, otherwise the plan might be upset. Such restrictions were imposed in countries during the war in the case of essential services.

workers could also be transferred from one place to another just like Government servants. The Government tries to adjust supply to demand.

Finance. The Russians had repudiated foreign debts and could not hope to secure foreign loans. They relied, therefore, mostly on created money. Paper money was issued by the State in enormous amounts. There was inflation with all the inevitable consequences, exorbitant prices and a very high cost of living. They also raised loans from the people. Every worker had compulsorily to subscribe to the State bonds a certain portion of his monthly earnings, of course, in easy instalments. Later on, income from socialised industry flowed in and helped to finance the later stages of planning.

Interest. Russians have not abolished interest altogether. The Government itself pays 8 to 10% interest on State loans. The high rate of interest shows an attempt to bring the demand for and supply of capital in equilibrium. The banks also pay interest on personal accounts. Interest as remuneration to capitalist, i.e., payment to private owners of idle money, does not occupy an important place in Russian economy as private capital has practically disappeared. State borrows and pays interest and appropriates the profit of industry.

Allocation of factors of production. The State planning authority tries to estimate the amounts of factors required for the target production in an industry and arranges for the supply. It is first decided which industries have to be developed and to what extent, and the factors are diverted into channels decided by the State authorities and not according to consumers' preferences. For example they concentrated first on heavy industries. Naturally there was a shortage of consumers' goods whose prices shot up. In our system factors of production would rush towards consumers' goods industries to make up for the deficiency. But a socialist State does not allow this diversion. Shortage would continue and rationing and price control would be introduced. In Russia the normal function of the price-mechanism which brings about an optimum distribution of resources, as judged by the consumers' valuations, is nullified by State action. Thus the resources are allocated not according to the valuation of the consumers but according to the valuation of the State. The State decides what is best for the nation at a particular period of her life and arranges the distribution of resources accordingly. The consumers must adjust their demands according to production and the exigencies of the State.

23. The Fascist Plan. The chief author of the Fascist philosophy Mussolini has made his exit and his senior partner Hitler is also reported to be dead. All the same the economic system which they have bequeathed is well worth studying. It can be especially useful and instructive to those nations which are anxious to realise the benefit of planned economy without nationalising the means of production.

by the strong or injuring of the national interest in any manner is rendered impossible. On the other hand, Fascism borrows good points of Socialism avoiding its pitfalls. The Fascist State takes no risk of capital investment, does not overhaul the whole system throwing it in a melting pot. By leaving private ownership and management of the means of production in the hands of private individuals it avoids formalism, corruption, inefficiency, timidity, red-tapism, and bureaucratic management, but retains the resiliency, vitality, resourcefulness and adaptability of capitalist production. But it does the planning like a socialist State without much botheration and responsibility.

The supremacy of the interests of the community as distinguished from those of the individuals, the preservation of national harmony and the avoidance of senseless class antagonism and harnessing the resources of the community to further the highest interests of the nation are the most outstanding features of Fascism or State-controlled capitalism, as it is also called.

24. The Fascist Organisation. To facilitate and make effective the type of State control that a Fascist State contemplates an appropriate economic organisation is essential. In Italy corporatives or syndicates have been formed in each trade and industry including representatives of the employers, employees and of the Fascist party. There are local corporatives, provincial corporatives and the national corporatives. The employers and the employees have their separate organisations too. In each there is a corporative council, representing all the interests concerned, which is the supreme governing organ. The representative of the Fascist party in each council is there as a reminder that national interests are to be supreme in every decision. At the top of all corporatives is the National Council of Corporatives working under the Ministry of Corporatives. The National Council is responsible for formulating all economic policies and giving major economic decisions. It co-ordinates all economic activities in the country and lays down the economic plan and looks to its execution.

In Germany, too, self-governing bodies were organised in each industry and trade fully representing all interests involved. At the top there was the National Economic Council working under the general direction and supervision of the Minister of Economics. The National Economic Council was responsible for planning and regulating the entire economic life of the country and in making it work as one harmonious whole. Unlike Italy, separate organisations of the employers and the employees were not permitted. There was one organisation, *viz.*, Labour Front representing both sides.

25. Fascist Control. A rigid centralised control of the entire economic life of the country is the most outstanding feature of Fascism. The resources of the community are distributed in accordance with a central plan. The nature and the volume of production is controlled. There are restrictions on new capital issues so

that the factors of production are diverted into such directions as are best desired by the State and not as necessarily indicated by the consumers' preferences.

Dividends are limited and profits very heavily taxed so as not to exceed 6%. Limitation of dividends makes for automatic building up of sound reserves for the industry. It not only creates a solid foundation but provides finances for its expansion from its own resources. Further, as there are restrictions on new investments, the Government could raise cheap loans from this source. So long-term rates of interest were reduced. Cheap money was, therefore, available for the government and industry.

As for the labour problems, strikes or lock-outs were strictly prohibited. Industrial courts settled individual disputes and the labour officials of the Government decided disputes in which the whole body of the workers was concerned. The employers had to pay at least the wages fixed by the Government. They could pay more if they liked.

In order that the entire industry may be effectively subjected to State control, each industry was ordered to form cartels so that on the eve of the war (1939-45) almost the entire German industry had become cartellised and could operate as one unit. It realised that to co-ordinate the activities of numberless scattered entrepreneurs was difficult. There was greater likelihood of evasion. The purpose of the control may be defeated. Cartellisation removes this danger. Working efficiency was improved and costs lowered. All the economies of rationalisation were realised.

Agriculture in Germany was shown a greater degree of solicitude for very apparent reasons. Agricultural Associations representing the landowners, the farmers and the tenants were formed. Marketing Associations were established. The result was an efficient organisation of production and most economical distribution. Prices were stabilised at levels which were considered remunerative for the growers. Imports from abroad were so regulated that the home producer was adequately protected. The country was helped to produce as much of a commodity as was desired.

Prices of other goods were also fixed not in accordance with consumers' preferences but in accordance with the expenses of production. This seems arbitrary but not the less rational than under competition. Considering the costs they are quite rational and the consumer must pay this price if he wants the thing. Market fluctuations were not permitted to ruin a producer.

A 'closed economy' like this involves a strict control of foreign exchange and foreign trade. The country is not cut off. But imports and exports were not governed by the motive of private profit but according to the necessities of the State.

A Fascist economy allows the operation of demand and supply forces within reasonable limits. It takes away sting from socialism

business of life." Discuss.

(C. U. 1940, 1934 ; Bom. 1942, All. 1933).

16. "Economics is a study of business in its social aspects." Explain and illustrate. (C.U. B. Com., 1931, 1941, Patna 1945).

17. Define Wealth and discuss the relation between Wealth and Welfare. (C. U. 1930; Dacca 1938, 1939).

18. "Political Economy or Economics should teach us the virtues of economy or frugality." Criticise.

19. "Economics is a social science dealing with the problems of material welfare and prosperity of mankind." Discuss.

20. Economics has been defined as a science of wealth. Is this definition adequate or appropriate? Give reasons.

Consumption

1. Explain the conception of 'consumer's surplus.' What are the effects which a change in the condition of supply is likely to exert on it? (P. U. 1933).

2. Define the Law of Diminishing Utility, and explain carefully the relation it bears to the principles of taxation. (P. U. 1933).

Or,

Estimate its importance in shaping the theory and practice of modern taxation. (P. U. 1939).

3. Explain the concept of 'elasticity of demand? What is its use in the theory of value? (P. U. 1934, 1938, 1942.)

How can elasticity be measured?

(P. U. 1938, 1940; C. U. 1936, 1942, 1946).

4. Write short notes on any three of the following :—

- (a) Consumer's Surplus.
- (b) Joint Demand.
- (c) Standard of Living.
- (d) Elasticity of Demand.
- (e) Engel's Law.
- (f) Law of Substitution.
- (g) Marginal Utility.

5. "The application of the principle of substitution extends over almost every field of economic inquiry". Explain.

(P. U. 1937, 1942; C. U. 1923 ; All. 1938; Delhi 1940 ; Agra 1941 ; Nag. 1942.)

Or,

What is meant by the principle of Equi-Marginal Returns? Explain its importance in Economics. (P.U. 1944).

6. Explain the terms Demand and Demand Schedule and show the relationship between the Demand Schedule and Demand curve. (C. U. 1926 ; P. U. 1938).

7. What do you understand by Consumer's sovereignty? How far is it real and what are its functions? (P. U. 1943).

2. What do you understand by the term 'land' as used in Economics? What are its peculiarities? Discuss its importance as a factor of production.

3. State the Law of Diminishing Returns with its limitations.
(C. U. 1926, 1937; Agra 1937, All. 1934; Delhi 1936; Mad. 1937; Nag. 1941; Pun. 1937).

4. Examine the significance of the Law of Diminishing Returns and indicate its bearing on (i) the Malthusian Theory of Population and (ii) the theory of rent.

5. Explain the terms (i) 'dose of labour and capital'; (ii) marginal land; and (iii) extensive and intensive methods of cultivation.

6. Does the Law of Diminishing Returns apply also to factors other than land? Explain fully.

Labour.

1. Write a note on the Optimum Theory of Population.

(P. U. 1935).

Or

Define over-population and under-population in the light of Optimum Theory.

(Benaras 1938; Dacca 1942, 1943).

2. What was Malthus' theory of population? Discuss the present position concerning this problem.

(P. U. 1940; Agra 1944; Nag. 1942).

3. What are the factors that affect the efficiency of labour and what method do you consider best to measure it.

(P. U. 1938; C. U. 1939; Agra 1940; Nag. 1942).

4. Examine the conditions that promote efficiency of Labour,

(P. U. 1948).

5. "Division of Labour is limited by the extent of the market." Discuss.

(P. U. 1943).

6. What is meant by Division of Labour? Briefly discuss its advantages and disadvantages.

(C. U. 1930; All. 1939).

7. Define Labour. Distinguish between productive and unproductive labour.

8. What are the peculiarities of labour as a factor of production?

9. "The problem of population is not one of mere size in relation to food supply but of efficient production and equitable distribution." Discuss.

10. "Of all sorts of luggage man is the most difficult to be transported." Discuss with special reference to India. Discuss the factors which in recent years have increased the mobility of labour.

Capital.

1. Write short notes on Fixed Capital and Circulating Capital and mention the factors that determine the ratio between the two in an industry.

2. Define capital and briefly discuss the functions it performs in production. (C. U. 1926, 24.)

3. What is capital? Briefly discuss its origin and the forces that govern its accumulation. Account for the slow growth of capital in India.

4. "In the short run Labour and Capital are competitive; in the long run they are complementary." Discuss the statement. (C. U. 1932)

5. Examine the effects of machinery on labour and discuss whether the progress of mechanical invention is injurious to labouring classes. (C. U. 1925)

6. 'Land is capital.' Discuss.

7. Discuss the economic effects of the introduction of machinery. Does machinery create unemployment? Give reasons.

8. What are the functions of capital? What is meant by saying that capitalistic production involves a round-about process?

9. Indicate the relation between capital and money. Show how far capital depends upon use and intention.

10. Indicate the relation between the rate of interest and the volume of saving.

11. What is meant by mobility of capital? How far can capital be said to be mobile in India?

Organisation.

1. Write a short note on Joint Stock Companies.

2. What do you understand by the Scale of Production. Indicate the factors that lead to variation in the scale of production. (P. U. 1936, 1938)

Or

Indicate the factors that determine the size of industrial unit in a community. (P. U. 1938)

Or

Indicate the advantages and drawbacks of large scale production? (P. U. 1948; C. U. 1936; All. 1936)

3. Discuss the relative merits and demerits of competition and monopoly. (P. U. 1936; C. U. 1926)

Or

What is monopoly? What are its advantages and disadvantages. P. U. 1944)

4. Enunciate the Laws of Increasing Returns and Diminishing Costs, bringing out clearly the points of difference between the two. (P. U. 1938).

5. Amplify the statement that there is a continual movement of towards equality of advantages in different fields of industry, and note the circumstances under which the tendency may become inoperative. (P. U. 1939)

6. Discuss the causes of localisation of industries, and account for the present-day tendency towards decentralisation. (P. U. 1939)
Mention the consequences of localisation.

(All. 1940 ; Nag. 1941 ; C. U. 1929)

7. Explain what is meant by internal and external economies and consider the part played by them in bringing about increasing returns. (P. U. 1941)

8. Compare partnership and joint stock company or forms of business organisation.

9. Compare a joint stock concern and a co-operative store as types of business organisation.

10. "The part played by Nature conforms to Diminishing Returns while the part which Man plays conforms to Increasing Returns." Discuss. (C. U. 1932)

11. Account for the operation of the Law of Diminishing Returns in Indian Agriculture and say how it can be counteracted.

12. In what circumstances is small-scale production more economical than large-scale production ?

Why do small-scale producer still persist in many industries ? (C. U. 1940)

13. What is the nature of the services performed by the entrepreneur and how is he rewarded ? (C. U. 1943)

14. Discuss the various forms of combinations among producers. Are such combinations necessarily injurious to society ? (C. U. 1927)

15. What are Trusts and Cartels ? Examine their merits and demerits. (C. U. 1945)

16. "The Law of Diminishing Returns is only one phase of the universal law of variable proportions." Explain.

(C. U. B. Com., 1942 ; Nag. 1943 ; Dacca 1943)

17. How are the factors of production allocated among the various uses ?

18. How far is the modern economic system adaptable ?

19. Distinguish between Optimum Firm and Representative Firm. What causes determine the size of optimum firm ?

20. Explain with illustration what is meant by (a) Vertical combination, (b) Horizontal combination.

21. What is a Holding Company ? Discuss its merits and demerits.

MODEL QUESTIONS

22. Give the main features of modern industrial organisation.
23. Discuss the fundamental principles underlying co-operation and show how it avoids the drawbacks of both capitalism and socialism.
24. Why does an industry once started in a particular place tend to remain there?
25. What factors limit the growth of a business?
26. Explain the origin of nationalisation and indicate its main features.

EXCHANGE

Exchange markets and Price Formations.

1. Give an account of the Central Theory of Value. (P.U. 1933)
2. Distinguish between legitimate and illegitimate speculation. Explain the economic consequences of the latter. (P. U. 1933, 1937)

How would you suppress illegitimate speculation. (P. U. 1937)

3. Write short notes on any three of the following :—
 (a) Contang ; (b) Futures ; (c) Produce Exchange ; (d) Rigging ;
 (e) Opportunity Costs ; (f) Imperfect competition ; and (g) Hedging.
4. "If prices fall, demand increases, but if demand increase, prices rise : I cannot see how it is that prices ever changes. Comment and criticise. (P. U. 1934)

5. What are the functions of a Stock Exchange ? How does it facilitate the financing of industries ? (P. U. 1934, C. U. 1930)

6. What is meant by organised marketing ? In what respects, and why, is such marketing lacking in India ? (P. U. 1933)

7. In every market some possible buyers are willing to bid very high and some possible sellers to sell very low. Why, then, do lower bids and higher offers not become effective. (P. U. 1935)

8. Distinguish between monopoly prices and competitive prices. How are monopoly prices determined ? (P. U. 1935, 1939)

Or

How does 'monopoly price' differ from price determination under competitive conditions ? (P. U. 1945)

Or

Indicate the methods and objects of Price Discrimination under Monopoly. (P. U. 1939)

9. Explain the laws of supply with reference to (a) short period and (b) long period. (P. U. 1936)
10. Under what circumstances would the price of a commodity tend to approximate to its marginal expenses of production. (P. U. 1937)

11. Distinguish between a 'Marginal Firm' and a 'Representative Firm.' Which of these do you think, and why, is more important in price determination in practical life? (P. U. 1938)

*12. Define a market and discuss the factors which determine its size for different commodities (P. U. 1940, C. U. 1920)

What would you expect to be the size of the market in bricks, vegetables and precious metal? (C. U. 1915, 1917, 1920)

13. What is Normal Price? How is it determined? (P. U. 1940; C. U. 1917, 1923)

Or

Discuss the concept of Normal Value. (P. U. 1948)

14. There can be general rise and fall in prices, but can there be a general rise and fall of values? Give reasons (P. U. 1941)

15. Explain the usefulness in the economic system of

(a) Organised Markets. (b) Trading in Futures. (P. U. 1942)

16. Explain how value is determined under conditions of joint demand. (P. U. 1942)

17. What are the advantages and dangers of speculation? (P. U. 1943, 1945)

18. Distinguish between 'joint demand' and 'composite demand' Explain the difficulties of price determination under conditions of joint demand. (P. U. 1945)

19. Analyse the factors that obstruct the free play of competition in modern economic system. (P. U. 1948)

20. What role does Price mechanism play in the economic activity?

21. What is meant by equilibrium price? How is it determined under competitive conditions? (C. U. 1929, 1933, 1939)

*22. What is Market Price? Distinguish it from normal price and say how market price is determined. (Bom. 1942; All. 1937; Delhi, 1936; Pat., 1944)

23. Discuss the importance of the time element in the theory of value. (C. U. 1937)

Or

A rise in demand may lead to fall in price. How do you explain the paradox?

Or

Discuss the effects of increased consumption of (a) Wheat (b) Steel manufactures on the value of these commodities. (C. U. 1931, 1934)

24. What do you understand by the term 'cost of production'? Distinguish between Prime Costs and Supplementary Costs and examine the bearing of this distinction on the theory of value. (Pun. 1945, All. 1935, Delhi 1936)

25. Explain the concept 'Opportunity Cost' and discuss its bearing on the problem of relative values.

26. 'Water is more useful than gold, and yet gold has greater value'. How do you explain the paradox?

(C. U. 1932, 1937 ; Pat. 1940)

27. "Marginal uses do not govern value, but are governed together with value by the conditions of demand in relation to supply." Elucidate.

(All. 1933 ; Bana. 1939)

28. The normal price of a commodity cannot be permanently either above the cost of production or below it. Why?

29. What is joint supply ? How is value determined under joint supply ?

30. How far have the functions of the entrepreneur been delegated to others in modern times ?

31. Explain the marginal theory of value and show why it is necessary to study the behaviour of demand and supply at the margin.

Money.

1. What do you understand by the term 'Money.' Classify the various forms of money in circulation in the country and indicate the characteristic of each.

(P. U. 1932)

2. What are the considerations determining an individual's demand for money, and what are the principal influences which cause variation in this demand ?

(P. U. 1932)

3. What, according to the Quantity Theory of Money, would be the effect on the general level of prices of the following (other things being supposed to remain the same)—

(a) Improvement in the means of communication ;

(b) The growth of trade and population ;

(c) The development of deposit banking ?

(P. U. 1932)

4. How are general changes in prices brought about ? How can they be measured ? Give an Indian illustration.

(P. U. 1933)

5. Write short notes on :— (a) Bimetallism, (b) Reflation (c) Seigniorage, (d) Fiduciary Money, (e) Monometallism, (f) Legal Tender, (g) Sterling Balances, (h) Standard money, (i) Token Money, and (j) Gold Bullion Standard.

6. How does a long continued fall in prices affect different sections of the community ? Give Indian illustrations.

(P. U. 1934)

7. "Since every one is both a creditor and a debtor changes in the value of money do not matter." Comment and criticise

(P. U. 1935).

8. What is Gold Exchange Standard ? Under what conditions is it likely to be a failure ?

(P. U. 1936).

27. Explain the terms 'inflation', 'deflation' and 'reflation'. Discuss the influence of an unbalanced budget on prices. (C. U. 1935).
28. Briefly mention the evils associated with inflation. What measures can you suggest to counteract these evils?
29. What are the different forms of paper money? How is the convertibility of paper money maintained in India?
30. Inflation brings about a compulsory redistribution of incomes. How? Which classes gain and which lose by the process?
31. "The Indian rupee is a curious mixture of token and standard coin." Discuss.

Credit and Banking.

1. Discuss the structure and functions of the money market and the stock exchange. Explain Bank Rate and Market Rate and show their mutual relation. Can you explain why London is generally recognized as the world's monetary clearing house? (P. U. 1932)
2. "Credit is one thing, and the forms of credit are quite another thing." Explain both and briefly trace the evolution of modern credit. (P. U. 1933)
3. Explain the economic advantages of a sound system of credit. (P. U. 1934)
4. "Like all useful and delicate instruments credit is dangerous when abused." Why? (P. U. 1935)
5. What is an exchange bank? Indicate its place in the economic organisation of a country. (P. U. 1937)
6. Discuss the aims and objects of Bank Rate Manipulations and Open Market Operations by central banking authorities. (P. U. 1939)
- * 7. What are the principal methods of regulating note issue? (P. U. 1940)
- * 8. What are the main functions of the Central Bank? How far has the Reserve Bank of India succeeded in discharging these functions? (P. U. 1942)
9. Explain how a bank deposit arises and consider the limitations of banks to create credit. (P. U. 1944)
10. What is meant by the term 'Money Market'? What are the constituents of Indian money market? (P. U. 1938)
11. Explain the following :—
 (a) 'Every bank loan creates a deposit.'
 (b) 'A good bank manager knows the difference between a bill and a mortgage.'
12. What functions does a commercial bank perform? What economic advantages does it confer on the community?

13. Explain the working of a Clearing House. How is it advantageous to the community ?
14. How does a Central Bank control credit ?
15. 'Credit is capital'. Criticise. Trace the effect of credit on prices.
16. Prepare an imaginary balance-sheet of a bank.

International Trade.

1. What are the various considerations urged in favour of protective duties ? Explain their significance with reference to current economic conditions of India. (P. U. 1934)

Or

Examine the validity of arguments in favour of protection. (P. U. 1939)

2. Examine the limitations of a system of protection. (P. U. 1918)

3. Write short notes on any three of the following :—

(a) Law of comparative costs, (b) Invisible exports, (c) Dumping
(d) Discriminating protection, (e) Protective tariff, (f) Free Trade, (g) Imperial Preference.

4. Give a concise but clear account of the general theory of international values. (P. U. 1934, 1945)

Or

Explain the theory of comparative costs in relation to International Trade. (P. U. 1940)

Or

State concisely what seems to you the most important points in the theory of comparative costs. (P. U. 1942)

5. If a country to which other countries owe large sums of money puts almost prohibitive duties upon all imports, what will happen ? (P. U. 1941)

6. Write a critical note on the economic advantages of free trade. (P. U. 1943)

7. In what respects does international trade differ from home trade.

8. Briefly mention the advantages and disadvantages of foreign trade.

9. Distinguish between Balance of Trade and Balance of Account. What steps can be taken to correct an adverse balance of account ?

10. What do you understand by a favourable balance of trade ? Is it necessarily advantageous to a country ? Discuss with reference to Indian conditions.

11. Explain :—

- (a) Why does a country import a commodity that it can produce more cheaply ?
- (b) Why does a country produce a commodity which it also imports ?
- (c) 'Exports pay for Imports'.

12. Compare import duties and quota system as a means of protecting home industries.

13. Indicate the forms in which International Trade has been restricted in recent times.

14. "Foreign trade is merely an extension of the principle of Division of Labour". Explain.

14. "In effect, foreign trade is nothing more than a highly organised system of barter". Explain.

Foreign Exchanges.

1. What are specie points ? On what do these points depend ? Can exchange go beyond these points ? If so, when and how ?

(P. U. 1932)

2. Write short notes on any three of the following :—(a) Cross Rate, (b) Purchasing Power Parity, (c) Exchange Equalisation Fund, (d) Exchange Control, (e) Blocked Accounts, (f) Clearing Agreements, (g) Specie points, (h) Mint par.

3. Enumerate the influences that bring about fluctuations in the rates of exchange.

(P. U. 1936)

4. Elucidate the principal features of the Purchasing Power Parity Theory.

(P. U. 1948)

5. How is the value of money determined internationally ?

(C.U. 1932 ; Bana. 1938)

6. What methods are adopted to correct adverse exchange rates ?

Trade Cycles.

1. Comment on the following dicta issued by a firm of manufacturers :—

When some one stops buying, some one stops selling.

When some one stops selling, some one stops making.

When some one stops making, some one stops earning.

When some one stops earning, some one stops buying.

(P.U. 1934)

2. What is a crisis, and how is it brought about ? (P.U. 1938)

3. What do you understand by a trade cycle ? How are the cyclical fluctuations in trade and industry caused ? Suggest remedies.

4. What is a trade cycle ? Discuss some of its characteristics.
5. Briefly mention the more important explanations offered by economists of periodical ups and downs in trade and industrial activity.
6. Clearly indicate the main phases of a trade cycle.

Distribution.

General.

What do you understand by 'mobility' in the Economics of Distribution ? Indicate its relationship to the rates of interest.

(P.U. 1936)

2. Explain the term 'National Dividend'. Briefly discuss the principle which governs its distribution among the various agents of production.

(C.U. 1935 ; Agra 1942 ; Pat. 1944)

Or

Explain the General Theory of Distribution.

3. How far is the general theory of value applicable to the distribution of National Dividend ?

4. The problem of Distribution has become very acute in modern times. Why ?

5. "The National Dividend is at once the aggregate net product of, and the sole source of payment for all the agents of production within the country." Discuss.

Rent.

1. Write short notes on any three of the following :—(a) Producer's Surplus ; (b) Quasi Rent ; (c) Transfer Earnings, (d) Margin of cultivation, and (e) No-rent land.

2. "The rent of the land is not a thing by itself, but the leading species of a large genus." What does Marshall mean by this statement ?

(P.U. 1933)

Or

Rent is not a peculiarity of land. It can be traced in other factors too. How ?

- *3. Attempt a clear statement of the theory of rent ?

(P.U. 1935)

4. Analyse the nature of rent and indicate the position it is likely to hold under a socialistic regime.

(P.U. 1938)

5. Attempt a statement of the Recardian Theory of Rent.

(P.U. 1935)

6. "Corn is high not because rent is paid. But high rent is paid because corn is high." Discuss the relation between rent and price.

(C.U. 1936 ; All. 1936 ; Agra 1942 ; Delhi 1939)

7. 'Rent is paid for original and indestructible power of the soil'. Explain.

(C.U. 1945; '35 ; Agra 1941 ; All. 1935 ; Ben. 1938 ; Pun. 1938 ; Nag. 1943)

8. Explain the Marshallian restatement of the theory of rent.
(C.U. 1935 ; Agra 1936 ; Nag. 1939 ; Mad. 1936)

9. Explain, giving reasons, the effect on rent of

(a) Improvement in the means of communication and transport.

(b) Increase in population.

(c) Improvement in methods of cultivation.

(d) Economic progress in general.

10. Distinguish between Rent and Quasi-Rent

Would there be rent (a) if all lands were equally fertile ?
(C.U. 1945, 1929)

(b) if there were no tendency to diminishing returns ;

(c) if the Government owned all Lands ;

(d) if the lands were cultivated by the owners ;

(e) if the supply of better lands were practically unlimited; and

(f) if land revenue were abolished:

Give reasons in each case.

Wages and other Labour Problems.

1. What are the principal labour problems of today ? How would you attempt to solve them in India ?
(P.U., 1933)

2. Briefly describe the most acceptable theory of wages of labour.
(P.U. 1934)

3. What are the peculiarities of labour in relation to demand and supply ?
(P. U. 1935)

4. What do you mean by the 'minimum wage' ? What considerations should enter in its determination ?
(P.U. 1937)

5. Explain the connection between changes in the manners of living and the rate of earnings with reference to Indian conditions.
(P.U. 1937)

6. Discuss the functions and utility of Trade Unions.
(P.U. 1940)

7. It is sometimes said that labourers could increase their wages by first increasing their standard of living, that is by demanding more and better goods for consumption. Is this statement correct ? Explain how wages are determined and how best labourers can succeed in increasing their wages.
(P.U. 1943)

8. The average woman earns considerably less than average man. Why ?
(P.U. 1944, C.U. 1918)

9. Trace the influence of Trade Unions on the wage-rate. Consider limitations. (P.U. 1940, 1948 ; C.U. 1936, 1938)

10. Analyse the causes and suggest remedies for unemployment. (P.U. 1948)

11. Distinguish between real and nominal wages. What factors would you take into consideration in determining real wages ? (C.U. 1925 ; Agra 1941 ; All. 1942 ; Mad. 1937)

At present in India nominal wages are high, but real wages are low. Why ?

12. What is meant by economy of high wages ? Explain the statement that dear labour is really cheap labour. (C.U. 1944)

13. How far is it true to say that the theory of wages is an application of general theory of value ? (C.U. 1931 ; Agra 1939 ; P.U. 1935)

Or

"Labour is not a commodity, but is bought and sold like a commodity." Explain.

14. Briefly examine the various theories of wages. (C.U. 1924 ; Agra. 1942 ; Delhi 1940, Pun. 1935)

15. "The rate of wages is determined by the discounted marginal product of labour." Explain. (Agra 1938)

16. How do you explain the fact that labour in different occupations earns strikingly different rates of wages ? (C.U. 1940)

Account for different earnings of (a) domestic servants, (b) college teachers, (c) Govt. employees.

17. Examine the merits and demerits of the (a) Labour co-partnership, (b) Profit-sharing, and (c) Sliding scale of wages as means of settling differences between labour and capital. (C.U. 1947, '44)

18. How wages are determined ? Do wages in India always seek the same level ? Give reasons.

19. Why wages differ (i) from occupation to occupation, and (ii) from country to country ?

20. How is marginal analysis applied in the determination of wages ?

21. Distinguish between Time Wage and Piece Wage and say where each is suitable. Why do the workers prefer Time wage and the employers prefer Piece wage ?

22. Under what conditions can a trade union raise wages by a threat of a strike ?

23. Discuss the desirability and feasibility of (a) national minimum wage, and (b) minimum wage for selected occupations.

24. What is Social Insurance ? How far has India gone in providing social insurance to the factory workers ?

25. "Unemployment may be regarded as a shadow side of modern progress." Discuss.

Interest.

1. What do you understand by Interest ? How does it arise ? Indicate the factors that determine the general rate of interest.

(P.U. 1939)

2. Why is Interest paid ? Do you think that the complete abolition of interest payment would cause all savings to cease ?

(P.U. 1942)

3. Write short notes on—

(a) Liquidity Preference (b) Forced Savings.

4. Explain some of the causes of the movement of the rates of interest and their effects.

(P.U. 1944)

5. Enumerate the causes that give rise to interest payment. Does the net rate of interest tend towards equality ?

(P.U. 1946)

6. Distinguish between Gross Interest and Net Interest and analyse Gross interest into its various constituents.

7. Why does a village money-lender charge 18% interest ; whereas a bank charges only 6% ?

8. Explain how short and long-period rates of interest are determined.

(P.U. 1943)

9. "Interest is the measure of marginal productivity or marginal forbearance." Explain and comment.

(C.U. 1935, '33 ; Pun. 1945)

10. Why is there a tendency to equality in interest rates and not in wage rates ?

11. Examine the effect of economic progress on interest. Will the rate of interest ever fall to zero ?

12. "Interest is the price of time." Discuss.

Profits.

1. Indicate the nature of profits and indicate the position it is likely to hold under a socialistic regime.

(P. U. 1938)

2. Who is to be regarded as the risk-taker in modern economic organisation ? Is he paid for it and, if so, on what principles ?

(P. U. 1941)

3. Explain : "Profits are a constituent part of normal supply price."

(P. U. 1942)

4. Write short notes on—

(a) Net Profits, (b) Normal Profits.

5. Profit is reward to enterprise. Discuss.

(P. U. 1948).

6. Distinguish between Gross Profits and Net Profits. What are the constituents of gross profits ?

7. "Profits are like rent and do not enter price." Do you agree?
8. Examine the validity of the following propositions :—
 - (a) Profits tend to equality ;
 - (b) Profits tend to a minimum. (C. U. 1933)
9. What is profiteering ? Does it hinder or help the development of business ?
10. What is the social or economic justification of profits ?

Public Economics

1. Write a critical note on the desirability of efficient State regulation of Industry, with reference to existing conditions in India. (P. U. 1935)
2. Every State intervenes or interferes to some extent but some States go much further than others. What in your opinion should be the limit of State intervention in economic matters ? (P. U. 1944)
3. Enumerate the economic functions of a modern State.

Public Finance.

1. What is Public Finance ? Distinguish between Private and Public Finance.
2. Give the principal resources of income and the main items of expenditure of the Government of India. What changes, if any, would you wish to effect ? State your reasons clearly in either case. (P. U. 1932)
3. What are the principles which should guide public expenditure ? Answer with reference to Indian conditions. (P. U. 1935)
4. Write short notes on—
 - (a) Canons of Taxation ;
 - (b) Progressive Taxation ;
 - (c) Treasury Bills.
5. What do you mean by the incidence of a tax ? Trace the incidence of (1) customs duty paid in Bombay on long cloth imported from Lancashire by a wholesale merchant in Delhi, who sold it to a retailer in Gurdaspur, who sold it to a local resident ; and (2) Income-tax paid by the retail dealer in Gurdaspur. (P. U. 1936)
6. Distinguish between recurring and non recurring expenditure. How would you proceed to raise income to meet them ? (P. U. 1937)
7. What do you mean by a Progressive Tax ? With what ends in view is this kind of taxation usually adopted ? (P. U. 1938)

Or,

"The rich should pay in taxes more than the poor".

(C. U. 1930)

8. Discuss the practical importance of the study of the incidence of taxation. How would you determine the incidence of a tax on a consumable commodity ? (P. U. 1939)

9. Examine the merits and demerits of direct and indirect taxes. (P. U. 1940, 1945).

10. Some writers have urged that there should be only one tax — a tax on land values. Do you agree or disagree with the view ? Give reasons for your answer. (P. U. 1941)

11. Discuss the Canon of Equity in taxation. (P. U. 1948)

12. Should public expenditure on emergency be met out of taxation or loans ? Argue. (P. U. 1948)

13. State and illustrate Adam Smith's Canons of taxation.

(C. U. 1925, 1928)

Or

What are the principal canons of taxation ?

(C. U. 1919, P. U. 1934).

14. What is meant by 'differentiation' in taxation ? Give illustrations.

15. What is meant by taxable capacity ? What factors determine it ?

16. How is war financed ? Can the burden of a war be shifted to posterity ? If so, how ?

17. Discuss inflation as a means of financing war.

18. Write a short note on the doctrine of maximum social advantage as the aim of public finance.

(Agra 1942 ; Mad. 1934)

19. Discuss the effects of public expenditure on production and distribution.

20. What are the different forms of public debt ? Suggest measures by which the burden of public debt may be diminished.

21. Explain the Diffusion Theory in relation to taxation.

22. "Taxation is a powerful weapon in the hands of the State for removing inequalities in the distribution of incomes." Comment.

23. Distinguish between impact and incidence of a tax. Give illustrations. Trace the incidence of a tax on (a) economic rent, (b) monopoly, (c) buildings, (d) import duties, and (e) sales tax.

The Economic Systems.

1. Write short notes on :—

(a) *Laissez-fairs*. (b) Socialism.

2. The present organisation of industry is often described as capitalistic. Give an explanation of the meanings of this term, pointing out the distinguishing features of capitalism.

(P. U. 1942)

3. Trace the effects of social institutions on the economic life of a country.

(P. U. 1944)

4. Critically examine the main tenets of socialism.

(P. U. 1948)

5. The modern economic system has been called a Government by price. Do you agree? Give reasons.

6. Argue for the establishment of a socialist State in India.

7. Do you agree with the view that capitalism should be allowed to function unhampered in India for some time? Give reasons.

8. "The present age is frequently described as the age of Economic Freedom." Discuss.

(P. U. 1926)